UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GROUND-WATER DATA FOR GEORGIA, 1983

By J. S. Clarke, M. F. Peck, S. A. Longsworth, and K. W. McFadden

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Prepared in cooperation with the
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
GEORGIA GEOLOGIC SURVEY

Doraville, Georgia

1984

UNITED STATES DEPARTMENT OF THE INTERIOR

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PREFACE

Data used in this report were collected by the U.S. Geological Survey in cooperation with the State of Georgia; Chatham County; Glynn County; the cities of Brunswick and Valdosta; and the Albany Water, Gas, and Light Commission.

Records of all water-level measurements and water-quality data used in this report may be obtained upon request from the U.S. Geological Survey, Water Resources Division, 6481 Peachtree Industrial Boulevard, Suite B, Doraville, GA 30360.

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM (SI) UNITS

Multiply	By	To obtain
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
gallon per minute (gal/min) (gpm)	0.06309	liter per second (L/s)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)
	43.81	liters per second (L/s)

National Geodetic Vertical Datum of 1929 (NGVD of 1929): A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called mean sea level. NGVD of 1929 is referred to as sea level in this report.

CONTENTS

Page

ABSTRACT.......... xiv

1.0 INTRODUCTION.......... 1

2.0 GROUND-WATER LEVELS.......... 2

2.1 Paleozoic rock aquifers.......... 4

2.2 Crystalline rock aquifers.......... 8

2.3 Water-table aquifers.......... 12

2.4 Cretaceous aquifer system.......... 20

2.4.1 Providence aquifer.......... 28

2.5 Clayton aquifer.......... 32

2.6 Claiborne aquifer.......... 42

2.7 Floridan aquifer system.......... 50

2.7.1 Southwest area.......... 52

2.7.2 South-central area.......... 68

2.7.3 East-central area.......... 80

2.7.4 Coastal area.......... 88

2.7.4.1 Savannah area.......... 90

2.7.4.2 Jesup-Riceboro area.......... 100

2.7.4.3 Brunswick area.......... 114

2.7.4.4 Kings Bay-Okefenokee Swamp area.......... 124

3.0 GROUND-WATER QUALITY.......... 130

3.1 Savannah area.......... 130

3.2 Brunswick area.......... 136

4.0 SELECTED REFERENCES.......... 142

LIST OF ILLUSTRATIONS

Page

Figure 2.0-1. Map showing locations of observation wells for which hydrographs are included in this report................ 3

2.1-1. Map showing location of observation well in the Paleozoic rock aquifers................................ 5

2.1-2. Hydrographs showing the water level in observation well 03PP01, Walker County.................................. 7

2.2-1. Map showing location of observation well in the crystalline rock aquifers.............................. 9

2.2-2. Hydrographs showing the water level in observation well 10DD02, Fulton County.................................. 11

2.3-1. Map showing locations of observation wells in the water-table aquifers................................. 13

2.3-2. Hydrographs showing the water level in observation well 11AA01, Spalding County................................ 15

2.3-3. Hydrographs showing the water level in observation well 12Z001, Lamar County................................... 17

2.3-4. Hydrographs showing the water level in observation well 35P094, Chatham County................................. 19

2.4-1. Map showing locations of observation wells in the Cretaceous aquifer system............................ 21

2.4-2. Hydrographs showing the water level in observation well 28X001, Burke County................................... 23

2.4-3. Hydrographs showing the water level in observation well 18U001, Twiggs County.................................. 25

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.4-4. Hydrographs showing the water level in observation well 06S001, Chattahoochee County.................... 27

2.4.1-1. Map showing the location of observation well 12L021 and the water level in the Providence aquifer, October 1983...................................... 29

2.4.1-2. Hydrographs showing the water level in observation well 12L021, Dougherty County........................ 31

2.5-1. Map showing observation well locations and the water level in the Clayton aquifer, October 1983........... 33

2.5-2. Hydrographs showing the water level in observation well 05L001, Clay County............................. 35

2.5-3. Hydrographs showing the water level in observation well 07N001, Randolph County......................... 37

2.5-4. Hydrographs showing the water level in observation well 11L002, Dougherty County........................ 39

2.5-5. Hydrographs showing the water level in observation well 13L002, Dougherty County........................ 41

2.6-1. Map showing observation well locations and the water level in the Claiborne aquifer, October 1983......... 43

2.6-2. Hydrographs showing the water level in observation well 11L001, Dougherty County........................ 45

2.6-3. Hydrographs showing the water level in observation well 12L019, Dougherty County........................ 47

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.6-4. Hydrographs showing the water level in observation well 13L011, Dougherty County.............................. 49

2.7-1. Map showing the water level in the Floridan aquifer system, November 1982.............................. 51

2.7.1-1. Map showing observation well locations and the water level in the Floridan aquifer system in the southwest area, November 1982.......................... 53

2.7.1-2. Hydrographs showing the water level in observation well 13L003, Dougherty County.............................. 55

2.7.1-3. Hydrographs showing the water level in observation well 13L012, Dougherty County.............................. 57

2.7.1-4. Hydrographs showing the water level in observation well 13J004, Mitchell County.............................. 59

2.7.1-5. Hydrographs showing the water level in observation well 10G313, Mitchell County.............................. 61

2.7.1-6. Hydrographs showing the water level in observation well 09F520, Decatur County.............................. 63

2.7.1-7. Hydrographs showing the water level in observation well 08G001, Miller County.............................. 65

2.7.1-8. Hydrographs showing the water level in observation well 06F085, Seminole County.............................. 67

2.7.2-1. Map showing observation well locations and the water level in the Floridan aquifer system in the south-central area, November 1982.......................... 69

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.7.2-2. Hydrographs showing the water level in observation well 15L020, Worth County.......................... 71

2.7.2-3. Hydrographs showing the water level in observation well 17K001, Tift County........................... 73

2.7.2-4. Hydrographs showing the water level in observation well 18H016, Cook County........................... 75

2.7.2-5. Hydrographs showing the water level in observation well 19F039, Lowndes County........................ 77

2.7.2-6. Hydrographs showing the water level in observation well 19E009, Lowndes County........................ 79

2.7.3-1. Map showing observation well locations and the water level in the Floridan aquifer system in the east-central area, November 1982........................ 81

2.7.3-2. Hydrographs showing the water level in observation well 21T001, Laurens County........................ 83

2.7.3-3. Hydrographs showing the water level in observation well 25Q001, Montgomery County..................... 85

2.7.3-4. Hydrographs showing the water level in observation well 26R001, Toombs County......................... 87

2.7.4-1. Map showing the water level in the Floridan aquifer system in the coastal area, November 1983.......... 89

2.7.4.1-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Savannah area, November 1983...................... 91

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.7.4.1-2. Hydrographs showing the water level in observation well 36Q008, Chatham County........................ 93

2.7.4.1-3. Hydrographs showing the water level in observation well 36Q020, Chatham County........................ 95

2.7.4.1-4. Hydrographs showing the water level in observation well 38Q002, Chatham County........................ 97

2.7.4.1-5. Hydrographs showing the water level in observation well 39Q003, Chatham County........................ 99

2.7.4.2-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Jesup-Riceboro area, November 1983....................... 101

2.7.4.2-2. Hydrographs showing the water level in observation well 30L003, Wayne County.......................... 103

2.7.4.2-3. Hydrographs showing the water level in observation well 31L001, Wayne County.......................... 105

2.7.4.2-4. Hydrographs showing the water level in observation well 33M004, Long County........................... 107

2.7.4.2-5. Hydrographs showing the water level in observation well 34M054, Liberty County........................ 109

2.7.4.2-6. Hydrographs showing the water level in observation well 34N089, Liberty County........................ 111

2.7.4.2-7. Hydrographs showing the water level in observation well 35M013, McIntosh County...................... 113

LIST OF ILLUSTRATIONS--Continued

Page

Figure 2.7.4.3-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Brunswick area, November 1983........................ 115

2.7.4.3-2. Hydrographs showing the water level in observation well 33H127, lower water-bearing zone, Glynn County.. 117

2.7.4.3-3. Hydrographs showing the water level in observation well 33H133, upper water-bearing zone, Glynn County.. 119

2.7.4.3-4. Hydrographs showing the water level in observation well 34H391, brackish-water zone, Glynn County..... 121

2.7.4.3-5. Hydrographs showing the water level in observation well 33J044, brackish-water zone, Glynn County..... 123

2.7.4.4-1. Map showing observation well locations and the water level in the Floridan aquifer system in the Kings Bay-Okefenokee Swamp area, November 1983........... 125

2.7.4.4-2. Hydrographs showing the water level in observation well 33E027, Camden County.......................... 127

2.7.4.4-3. Hydrographs showing the water level in observation well 27E002, Charlton County........................ 129

3.1-1. Map showing location of chloride monitoring wells in the Savannah area.................................. 131

3.1-2. Graphs showing chloride concentrations in Chatham County.. 133

LIST OF ILLUSTRATIONS--Continued

Page

Figure 3.1-3. Graph showing chloride concentrations on Hilton Head Island, South Carolina.................................. 135

3.2-1. Map showing the locations of chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October 1983............... 137

3.2-2. Graphs showing chloride concentrations in the Bay Street area of Brunswick.. 139

3.2-3. Graphs showing chloride concentrations in the North Brunswick area... 141

List of observation wells for which water-level hydrographs are included in this report

County	Aquifer	Well number	Well name	Page
Burke	Cretaceous	28X001	Midville Exp.Sta.	23
Camden	Floridan aquifer system	33E027	Kings Bay	127
Charlton	Floridan aquifer system	27E002	Test well OK8	129
Chatham	Water table	35P094	UGA	19
Chatham	Floridan aquifer system	36Q008	Layne-Atlantic	93
Chatham	Floridan aquifer system	36Q020	Morrison	95
Chatham	Floridan aquifer system	38Q002	Pilot House	97
Chatham	Floridan aquifer system	39Q003	Test well 7, point 3	99
Chattahoochee	Cretaceous	06S001	Fort Benning	27
Clay	Clayton	05L001	W.F. George Dam	35
Cook	Floridan aquifer system	18H016	Adel	75
Decatur	Floridan aquifer system	09F520	Bolton	63
Dougherty	Cretaceous	12L021	Test well 10	31
Dougherty	Clayton	11L002	Albany Nursery	39
Dougherty	Clayton	13L002	Turner City	41
Dougherty	Claiborne	11L001	Test well 4	45
Dougherty	Claiborne	12L019	Test well 5	47
Dougherty	Claiborne	13L011	Test well 2	49
Dougherty	Floridan aquifer system	13L003	Albany-Dougherty Co.	55
Dougherty	Floridan aquifer system	13L012	Test well 3	57
Fulton	Crystalline rock	10DD02	Fort McPherson	11
Glynn	Floridan aquifer system	33H127	Test well 3	117
Glynn	Floridan aquifer system	33H133	Test well 6	119
Glynn	Floridan aquifer system	33J044	Test well 27	123

List of observation wells for which water-level hydrographs are included in this report--Continued

County	Aquifer	Well number	Well name	Page
Glynn	Floridan aquifer system	34H391	Test well 16	121
Lamar	Water table	12Z001	Dixie Pipeline	17
Laurens	Floridan aquifer system	21T001	Hogan	83
Liberty	Floridan aquifer system	34M054	Test well 2	109
Liberty	Floridan aquifer system	34N089	Test well 1	111
Long	Floridan aquifer system	33M004	Test well 3	107
Lowndes	Floridan aquifer system	19E009	Valdosta	79
Lowndes	Floridan aquifer system	19F039	Valdosta 8	77
McIntosh	Floridan aquifer system	35M013	Harris Neck	113
Miller	Floridan aquifer system	08G001	Fleet	65
Mitchell	Floridan aquifer system	10G313	Meinders	61
Mitchell	Floridan aquifer system	13J004	Wright	59
Montgomery	Floridan aquifer system	25Q001	Uvalda School	85
Randolph	Clayton	07N001	Cuthbert	37
Seminole	Floridan aquifer system	06F085	Spooner	67
Spalding	Water table	11AA01	Experiment Sta.	15
Tift	Floridan aquifer system	17K001	SCL Railroad	73
Toombs	Floridan aquifer system	26R001	Vidalia 2	87
Twiggs	Cretaceous	18U001	Test well 3	25
Walker	Paleozoic rock	03PP01	Fort Oglethorpe	7
Wayne	Floridan aquifer system	30L003	Johnson	103
Wayne	Floridan aquifer system	31L001	Mears 2	105
Worth	Floridan aquifer system	15L020	Sylvester	71

ABSTRACT

Continuous water-level records from 134 wells and more than 700 water-level measurements made in Georgia during 1983 provide the basic data for this report. Selected wells illustrate the effects that changes in recharge and pumping have had on the various ground-water resources in the State. Daily mean water levels are shown in hydrographs for 1983. Monthly means are shown for the 10-year period 1974-83. Mean annual water levels ranged from 9 feet higher to 6 feet lower in 1983 than in 1982. Water-quality samples are collected periodically throughout Georgia and analyzed as part of areal and regional ground-water studies. Along the coast, chloride concentrations in the upper and lower water-bearing zones of the Floridan aquifer system generally remained steady in the Brunswick and Hilton Head Island areas.

1.0 INTRODUCTION

Monitoring ground-water levels and water quality is essential to the management of a ground-water reservoir or aquifer. Fluctuations and long-term trends in water levels occur as a result of recharge to and discharge from the aquifer. Recharge varies in response to precipitation, evapotranspiration, and surface-water infiltration into the aquifer. Discharge occurs as natural flow from the aquifer to streams and springs, direct ground-water evapotranspiration, and withdrawal from wells.

Ground-water levels have been monitored in Georgia for at least a hundred years. In the early years, these data were used in areal reconnaissance studies, and published, usually as tables, with a few graphs of water-level trends. These data had limited value, especially considering the time lag between data collection and publication.

As part of the cooperative ground-water investigations undertaken by the U.S. Geological Survey and the State of Georgia, a statewide water-level measurement program to monitor long-term trends was begun in 1938. This program initially consisted of an observation well network to provide long-term data on changes in ground-water storage in the coastal area. Other wells were added in areas where changes in water levels might forewarn of potential water-quality problems. More than 700 water-level measurements were made in Georgia during 1983, and 134 network and project wells were monitored continuously.

This report continues a series of publications that annually presents both water-level and water-quality data for Georgia. Forty-seven wells have been selected to illustrate the effects that changes in recharge and pumpage have had on the various aquifers in the State. Daily mean water levels are shown in hydrographs for 1983. Monthly mean water levels, as well as chloride concentrations in selected areas along the coast, are shown for the 10-year period 1974-83. Because the 1983 hydrographs are plotted from daily mean values, the record low or high water level occurring on a day will be lower or higher than that shown on the hydrograph, which shows the mean for that day.

The cooperation and assistance of the following agencies in collecting water-level and water-quality data during 1983 are gratefully acknowledged: Georgia Department of Natural Resources, Georgia Geologic Survey; Chatham County; Glynn County; the cities of Brunswick and Valdosta; and the Albany Water, Gas, and Light Commission.

The writers extend thanks to Willis G. Hester (U.S. Geological Survey) for the layout and drafting of illustrations.

2.0 GROUND-WATER LEVELS

Mean annual ground-water levels in Georgia ranged from 9 feet higher to 6 feet lower in 1983 than in 1982. Of the 47 wells in this report, 4 had new record lows and 7 equaled or exceeded record highs.

During 1983, ground-water levels continued their recovery from record lows during the drought of 1981. This water-level rise was attributed to a reduction in pumping for irrigation as a result of greater-than-normal precipitation and to a general decrease in industrial ground-water use, chiefly in the pulp and paper industry as a result of the implementation of water conservation practices.

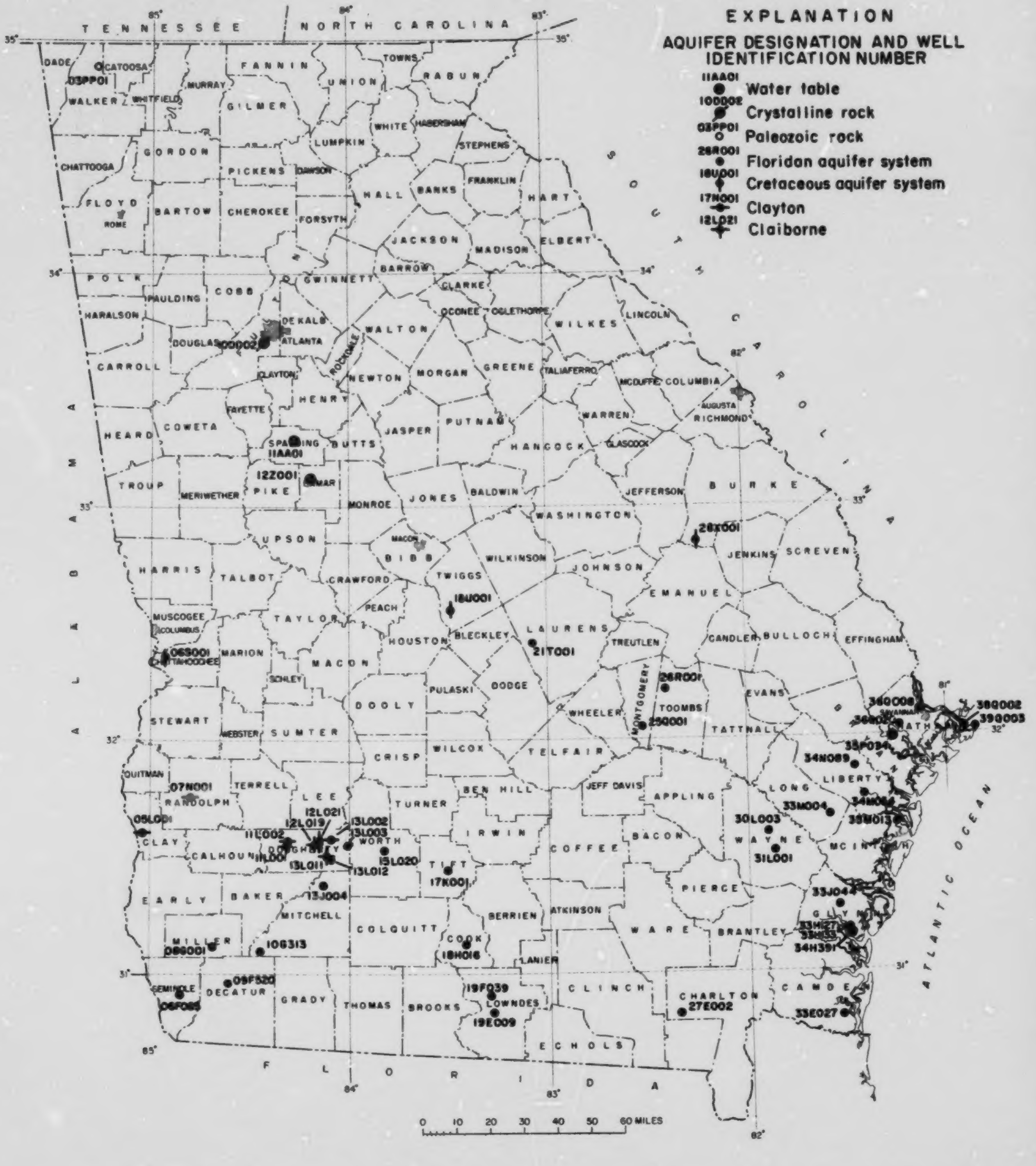

EXPLANATION
AQUIFER DESIGNATION AND WELL IDENTIFICATION NUMBER
11AA01 Water table
10DD02 Crystalline rock
03PP01 Paleozoic rock
26R001 Floridan aquifer system
18U001 Cretaceous aquifer system
17N001 Clayton
12L021 Claiborne
TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
ALABAMA
FLORIDA
ATLANTIC OCEAN
85°
84°
83°
82°
81°
35°
34°
33°
32°
31°
0 10 20 30 40 50 60 MILES
03PP01
10DD02
11AA01
12Z001
28X001
18U001
21T001
06S001
26R001
25Q001
38Q002
39Q003
36Q008
35P094
34N089
34M084
33M004
33M013
30L003
31L001
07N001
05L001
11L002
12L019
12L021
13L002
13L003
13L011
13L012
13L020
11L001
13J004
17K001
10G313
06G001
09F520
06F005
18H016
19F039
19E009
27E002
33J043
33H127
33H133
34H391
33E027
DADE
CATOOSA
WALKER
WHITFIELD
MURRAY
FANNIN
UNION
TOWNS
RABUN
GILMER
WHITE
HABERSHAM
STEPHENS
LUMPKIN
GORDON
CHATTOOGA
PICKENS
DAWSON
FRANKLIN
HALL
BANKS
HART
FLOYD
ROME
BARTOW
CHEROKEE
FORSYTH
JACKSON
MADISON
ELBERT
BARROW
POLK
PAULDING
COBB
GWINNETT
CLARKE
OCONEE
OGLETHORPE
WILKES
LINCOLN
HARALSON
DEKALB
WALTON
DOUGLAS
ATLANTA
CARROLL
CLAYTON
NEWTON
MORGAN
GREENE
TALIAFERRO
McDUFFIE
COLUMBIA
ROCKDALE
FAYETTE
HENRY
AUGUSTA
RICHMOND
WARREN
HEARD
COWETA
JASPER
PUTNAM
HANCOCK
GLASCOCK
SPALDING
BUTTS
TROUP
MERIWETHER
PIKE
LAMAR
MONROE
JONES
BALDWIN
JEFFERSON
BURKE
WASHINGTON
UPSON
MACON
BIBB
HARRIS
TALBOT
CRAWFORD
TWIGGS
WILKINSON
JOHNSON
JENKINS
SCREVEN
EMANUEL
MUSCOGEE
COLUMBUS
TAYLOR
PEACH
HOUSTON
BLECKLEY
LAURENS
TREUTLEN
CANDLER
BULLOCH
EFFINGHAM
CHATTAHOOCHEE
MARION
SCHLEY
MACON
PULASKI
DODGE
MONTGOMERY
TOOMBS
EVANS
STEWART
WEBSTER
SUMTER
DOOLY
WHEELER
TATTNALL
SAVANNAH
CHATHAM
BRYAN
CRISP
WILCOX
TELFAIR
QUITMAN
TERRELL
LEE
TURNER
BEN HILL
JEFF DAVIS
APPLING
LONG
LIBERTY
RANDOLPH
CLAY
CALHOUN
DOUGHERTY
WORTH
IRWIN
COFFEE
BACON
WAYNE
McINTOSH
TIFT
EARLY
BAKER
MITCHELL
COLQUITT
BERRIEN
ATKINSON
PIERCE
GLYNN
MILLER
COOK
WARE
BRANTLEY
LANIER
SEMINOLE
DECATUR
GRADY
THOMAS
BROOKS
LOWNDES
CLINCH
CHARLTON
CAMDEN
ECHOLS

Figure 2.0-1.—Locations of observation wells for which hydrographs are included in this report.

2.1 Paleozoic Rock Aquifers

Ground-water levels in the Paleozoic rock aquifers are affected mainly by changes in precipitation. Rainfall in the area is heavy in winter and midsummer and relatively light in spring and autumn. Water levels generally are at their highest for the year in March or April and at their lowest for the year in October, November, and December.

Wells in areas having a thin soil cover commonly show a rapid response to heavy rainfall and may experience a water-level rise of several feet within a few minutes or hours. In areas having a thick soil cover, wells may show little response to individual rainfall events, but undergo a gradual rise in water level during wet periods. Most wells experience a slow decline in water level between rainfall events.

The hydrographs for observation well 03PP01 (Fort Oglethorpe) illustrate the cyclic effects that precipitation has on water levels in areas of thin soil cover.

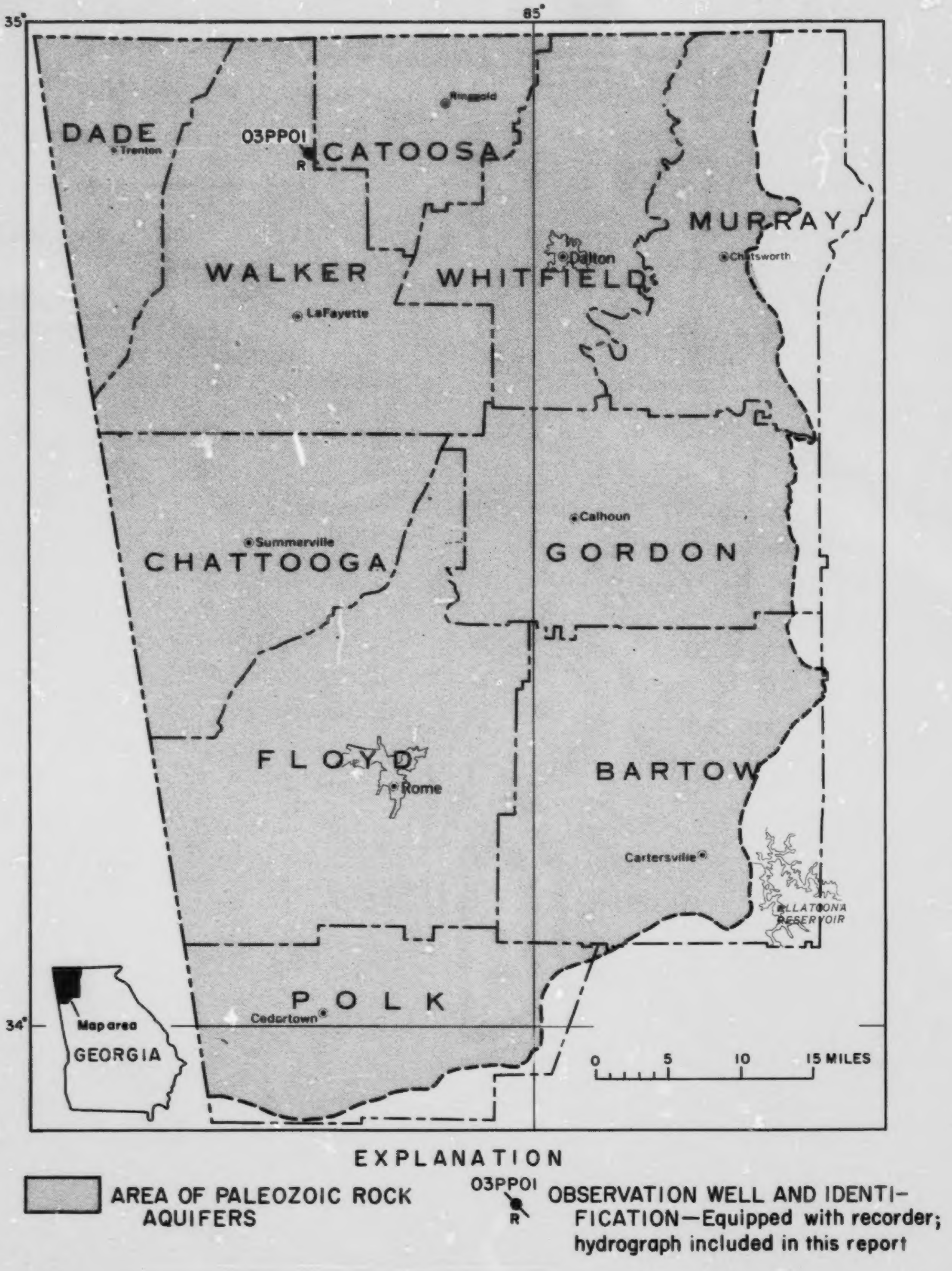

35°
85°
DADE
Trenton
03PP01
R
CATOOSA
Ringgold
WALKER
LaFayette
WHITFIELD
Dalton
MURRAY
Chatsworth
CHATTOOGA
Summerville
GORDON
Calhoun
FLOYD
Rome
BARTOW
Cartersville
ALLATOONA RESERVOIR
POLK
Cedartown
34°
Map area
GEORGIA
0
5
10
15 MILES
EXPLANATION
AREA OF PALEOZOIC ROCK AQUIFERS
03PP01
R
OBSERVATION WELL AND IDENTIFICATION—Equipped with recorder; hydrograph included in this report

Figure 2.1-1.—Location of observation well in the Paleozoic rock aquifers.

03PP01 FORT OGLETHORPE WALKER COUNTY

345403085160001 Local number, 03PP01.
LOCATION.--Lat 34°54'03", long 85°16'00", Hydrologic Unit 06020001, Chickamauga and Chattanooga National Military Park.
Owner: National Park Service, Fort Oglethorpe.
AQUIFER.--Chickamauga Limestone.
WELL CHARACTERISTICS.--Cable-tooled, unused observation well, diameter 8 in., depth 72 ft.
DATUM.--Altitude of land-surface datum is 730 ft.
Measuring point: Pointer on recorder shelter, 2.09 ft above land surface.
REMARKS.--Well sounded October 18, 1977. Water levels for periods of missing recorder record, June 8-14, November 20-27, and December 3-5, were estimated.
PERIOD OF RECORD.--1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.86 ft below land-surface datum, April 3, 1979; lowest, 21.70 ft below land-surface datum, August 5, 1978.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.80	5.62	10.80	10.71	10.81	10.90	12.34	17.45	19.43	20.06	20.24	11.49
2	9.61	5.65	10.82	9.48	10.82	11.04	12.78	17.59	19.47	20.07	20.24	11.86
3	9.64	9.96	10.84	10.42	10.82	11.20	13.04	17.69	19.49	20.11	19.90	6.95
4	10.68	10.66	10.86	10.65	10.84	11.36	13.24	17.79	19.49	20.11	19.13	7.35
5	10.74	10.71	10.23	5.64	10.90	11.55	13.44	17.90	19.51	20.13	19.13	7.75
6	10.76	9.06	5.84	5.45	10.96	11.76	13.64	18.03	19.53	20.16	19.70	8.14
7	10.80	9.34	9.74	9.80	11.03	11.96	13.85	18.12	19.54	20.17	19.84	10.20
8	10.84	10.56	10.65	9.36	11.08	12.18	14.06	18.19	19.55	20.20	19.89	10.79
9	10.04	10.67	10.72	6.43	11.16	12.42	14.24	18.27	19.57	20.20	19.91	10.90
10	10.52	9.27	10.75	9.34	11.22	12.66	14.43	18.35	19.58	20.33	19.94	11.06
11	10.70	8.94	10.77	10.56	11.37	12.90	14.62	18.41	19.59	20.24	20.00	9.16
12	10.77	10.46	10.80	10.66	11.45	13.14	14.81	18.47	19.62	20.24	20.05	9.89
13	10.79	10.64	10.81	10.72	11.52	13.36	15.00	18.53	19.65	20.22	20.06	10.75
14	10.80	10.68	10.82	9.80	11.60	13.59	15.18	18.59	19.67	20.24	20.07	10.56
15	10.85	10.74	10.84	9.80	10.02	13.79	15.34	18.66	19.71	20.23	15.17	10.78
16	10.90	10.77	10.55	10.68	9.21	13.98	15.48	18.70	19.73	20.33	16.72	10.92
17	11.00	10.78	10.86	10.72	10.70	14.14	15.62	18.75	19.75	20.24	17.41	11.06
18	11.16	10.80	10.83	10.74	10.77	14.28	15.74	18.81	19.76	20.25	17.80	11.20
19	11.34	10.82	10.85	10.76	5.93	13.95	15.86	18.87	19.81	20.25	18.13	11.38
20	11.46	10.86	9.70	10.79	5.80	14.18	15.98	18.93	19.82	20.26	16.22	11.62
21	8.40	10.90	9.75	10.80	7.46	14.30	16.09	19.00	19.83	20.27	16.58	11.64
22	8.00	9.20	10.70	10.80	8.35	14.43	16.20	19.05	19.86	20.28	16.94	9.96
23	10.30	9.74	10.77	8.14	8.60	14.09	16.34	19.11	19.89	19.74	13.10	10.51
24	10.68	10.60	10.50	8.25	9.94	14.26	16.46	19.17	19.91	19.99	13.46	10.82
25	10.72	10.70	10.66	10.48	10.64	14.40	16.58	19.22	19.94	20.08	13.32	10.84
26	10.76	10.76	10.53	10.70	10.73	14.56	16.68	19.27	19.95	20.10	14.18	10.98
27	10.58	10.78	8.22	10.74	10.79	14.70	16.82	19.29	19.97	20.15	8.50	9.85
28	10.68	10.77	10.51	10.77	10.81	14.84	16.94	19.33	20.00	20.18	8.86	5.67
29	10.61	---	10.68	10.79	10.84	14.93	17.11	19.35	20.02	20.19	10.34	8.75
30	10.50	---	10.72	10.80	9.99	15.03	17.22	19.37	20.03	20.20	11.05	10.62
31	10.70	---	10.70	---	10.82	---	17.32	19.46	---	20.22	---	10.76
MEAN	10.52	10.02	10.39	9.83	10.23	13.33	15.24	18.64	19.72	20.18	16.88	10.14

CAL YR 1983 MEAN 13.78 HIGH 5.45 LOW 20.33

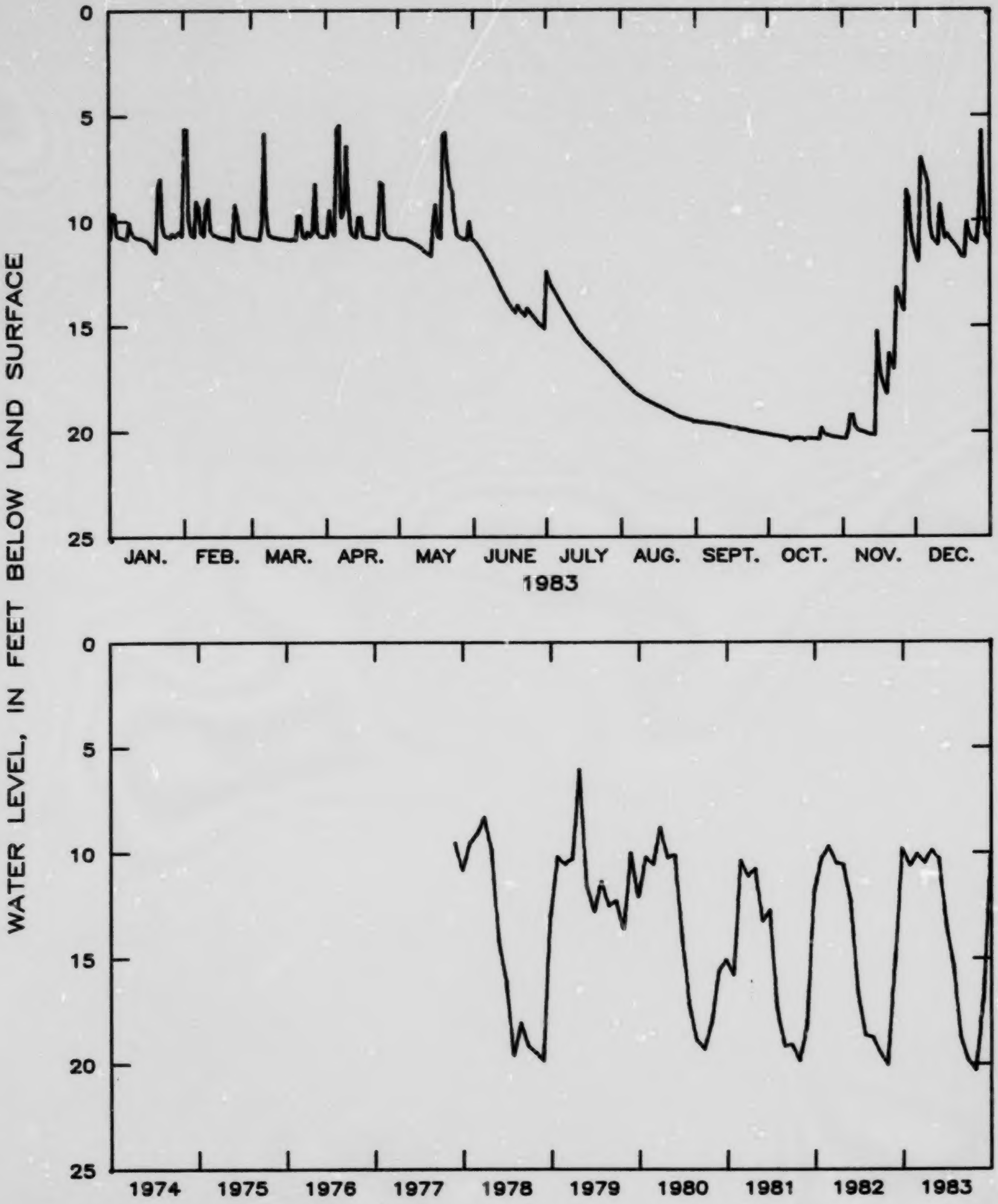


Figure 2.1-2.--Water level in observation well 03PP01, Walker County.

2.2 Crystalline Rock Aquifers

Ground-water levels in the crystalline rock aquifers are affected mainly by seasonal changes in precipitation and evapotranspiration. Rainfall in the area is heavy in winter and midsummer and relatively light in spring and autumn. Autumn is the driest season of the year. Ground-water levels rise rapidly with the onset of late winter rains and reduced evapotranspiration, and generally reach their highest levels for the year in March or April. Increases in evapotranspiration and decreases in rainfall during the spring and early summer cause ground-water levels to decline. Heavy precipitation in midsummer may cause small rises in ground-water levels, but the lack of recharge from light rainfall in the autumn results in water levels declining to the annual lows, generally in October or November.

The mean annual water level in the crystalline rock aquifer at well 10DD02 was about 1.3 feet lower in 1983 than in 1982. A new record low was recorded at well 10DD02 on September 1-2, 1983.

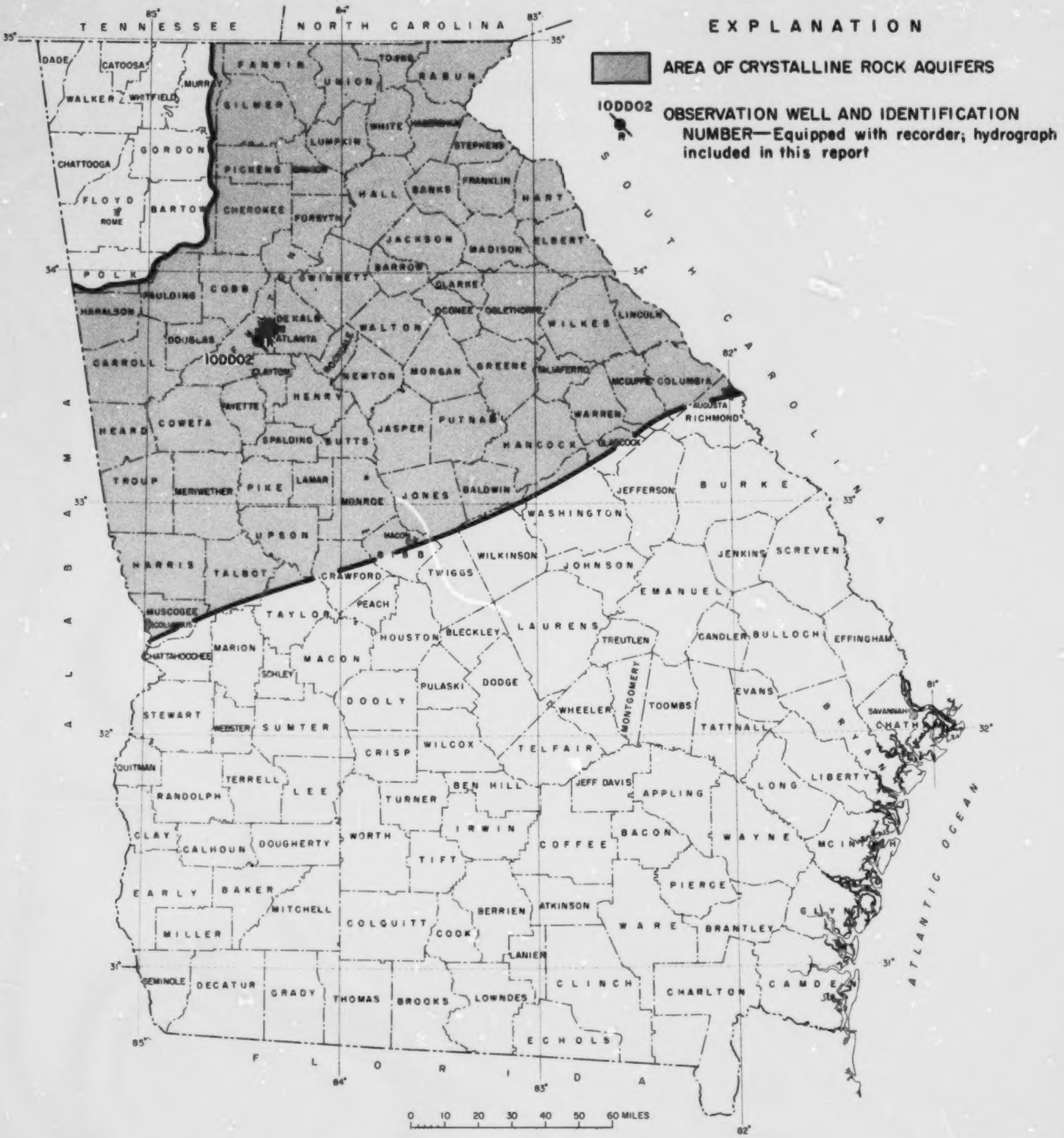

EXPLANATION
▨ AREA OF CRYSTALLINE ROCK AQUIFERS
10DD02 OBSERVATION WELL AND IDENTIFICATION NUMBER—Equipped with recorder; hydrograph included in this report
TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
ALABAMA
FLORIDA
ATLANTIC OCEAN
10DD02
ATLANTA
ROME
AUGUSTA
MACON
COLUMBUS
SAVANNAH
85°
84°
83°
82°
81°
35°
34°
33°
32°
31°
0 10 20 30 40 50 60 MILES

Figure 2.2-1.—Location of observation well in the crystalline rock aquifers.

334207084254801 Local number, 10DD02.
LOCATION.--Lat 33°42'07", long 84°25'48", Hydrologic Unit 03130002, 0.25 mi south of main entrance, 260 ft west of Roosevelt Highway.
Owner: U.S. Army, Fort McPherson.
AQUIFER.--Biotite gneiss.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in., depth 338 ft, cased to 41 ft, open hole.
DATUM.--Altitude of land-surface datum is 1,013 ft.
Measuring point: At land-surface datum.
REMARKS.--Well pumped and sounded February 14, 1976, to a depth of 338 ft. Borehole geophysical survey conducted November 19, 1974. Water levels for period of missing recorder record, October 23-24, were estimated.
PERIOD OF RECORD.--November 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.10 ft below land-surface datum, March 30, 1980; lowest, 8.09 ft below land-surface datum, September 1-2, 1983.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.06	4.74	4.43	4.09	4.56	5.26	6.11	7.29	8.09	7.60	7.98	7.01
2	4.72	4.38	4.52	4.00	4.54	5.35	6.12	7.30	8.09	7.60	7.95	6.99
3	4.45	4.32	4.57	4.04	4.48	5.36	6.14	7.26	8.02	7.59	7.90	6.62
4	4.64	4.60	4.55	4.18	4.52	5.34	6.17	7.16	7.91	7.57	7.80	6.15
5	4.72	4.70	4.44	4.23	4.61	5.38	6.16	7.14	7.83	7.55	7.85	6.17
6	4.72	4.58	4.20	4.22	4.69	5.40	6.16	7.14	7.80	7.62	7.91	6.10
7	4.72	4.52	4.07	4.18	4.70	5.41	6.27	7.12	7.79	7.70	7.93	6.12
8	4.75	4.59	4.18	3.94	4.64	5.44	6.36	7.15	7.78	7.74	7.96	6.27
9	4.76	4.38	4.32	3.64	4.72	5.51	6.31	7.20	7.76	7.75	7.93	6.39
10	4.74	4.48	4.38	3.76	4.80	5.61	6.29	7.32	7.75	7.76	7.82	6.47
11	4.72	4.56	4.45	3.90	4.84	5.64	6.34	7.47	7.73	7.73	7.89	6.17
12	4.86	4.72	4.48	4.01	4.83	5.64	6.39	7.52	7.68	7.68	7.99	5.84
13	4.92	4.70	4.49	4.09	4.82	5.65	6.43	7.60	7.65	7.65	8.01	5.85
14	4.86	4.55	4.46	4.12	4.84	5.67	6.46	7.70	7.65	7.77	8.03	5.98
15	4.82	4.58	4.46	4.16	4.84	5.66	6.52	7.72	7.71	7.84	7.93	6.21
16	4.86	4.58	4.44	4.26	4.79	5.70	6.67	7.62	7.72	7.84	7.95	6.39
17	4.86	4.56	4.40	4.28	4.92	5.77	6.78	7.57	7.70	7.84	8.03	6.42
18	4.96	4.62	4.42	4.18	4.98	5.79	6.85	7.56	7.71	7.80	8.03	6.39
19	5.02	4.63	4.51	4.27	4.96	5.82	6.88	7.58	7.73	7.80	7.99	6.33
20	4.95	4.72	4.46	4.38	4.94	5.84	6.90	7.62	7.68	7.83	7.77	6.39
21	4.85	4.73	4.34	4.42	4.94	5.87	6.94	7.74	7.51	7.86	7.60	6.40
22	4.86	4.52	4.50	4.42	4.90	5.88	6.94	7.86	7.46	7.86	7.64	6.28
23	4.82	4.27	4.54	4.28	4.93	5.93	6.96	7.93	7.55	7.84	7.59	6.17
24	4.57	4.34	4.42	4.26	5.00	5.92	6.99	7.98	7.58	7.81	7.29	6.16
25	4.88	4.50	4.34	4.45	5.06	5.90	7.01	8.05	7.58	7.79	7.08	6.28
26	4.88	4.64	4.20	4.54	5.07	5.96	7.08	8.01	7.53	7.81	7.15	6.24
27	4.82	4.62	3.89	4.56	5.11	6.02	7.18	8.00	7.51	7.85	7.11	6.17
28	4.85	4.47	3.94	4.55	5.16	6.04	7.27	7.99	7.51	7.94	6.90	5.61
29	4.85	---	4.12	4.56	5.12	6.04	7.30	8.00	7.54	7.93	6.81	5.65
30	4.80	---	4.16	4.57	5.11	6.08	7.32	8.04	7.54	7.94	6.94	5.93
31	4.84	---	4.09	---	5.15	---	7.31	8.06	---	8.00	---	6.08
MEAN	4.82	4.56	4.35	4.22	4.86	5.70	6.66	7.60	7.70	7.77	7.69	6.23

CAL YR 1983 MEAN 6.02 HIGH 3.64 LOW 8.09

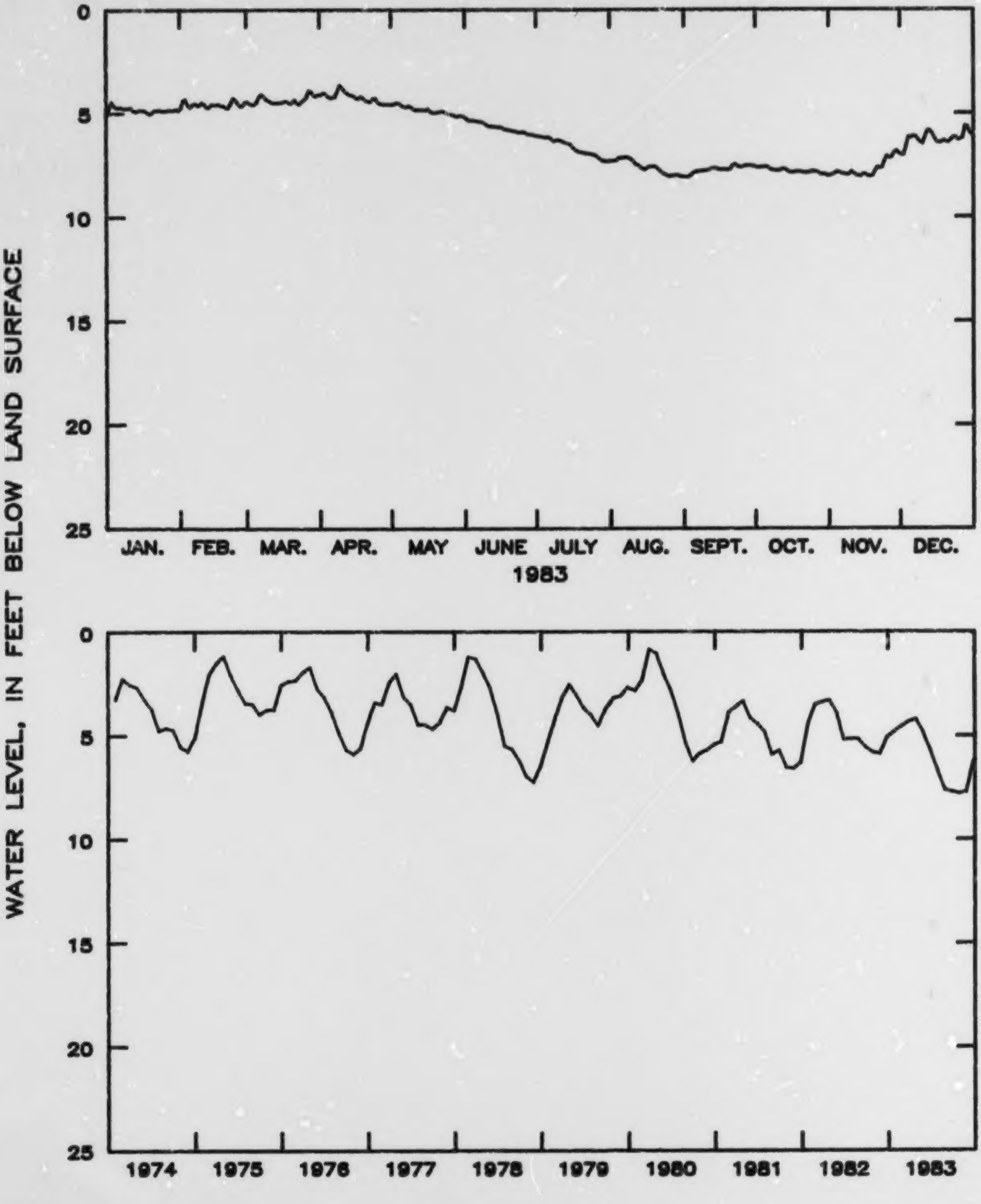


Figure 2.2-2.---Water level in observation well 10DD02, Fulton County.

2.3 Water-Table Aquifers

Shallow water-table aquifers are used for domestic and stock supplies in most areas of Georgia. Water-level fluctuations in these aquifers are caused mainly by changes in precipitation; water levels generally rise rapidly during wet periods and decline slowly during dry periods. Prolonged droughts may cause water levels, particularly on hill tops and steep slopes, to decline below the intakes of dug, bored, or shallow drilled wells, resulting in well failures. Generally, the well yields are restored with the return of adequate precipitation.

Mean annual water levels for three wells in shallow water-table aquifers ranged from 0.9 foot lower to 1.7 feet higher in 1983 than in 1982. The 10-year hydrographs illustrate the water-level recovery from the effects of the 1981 drought.

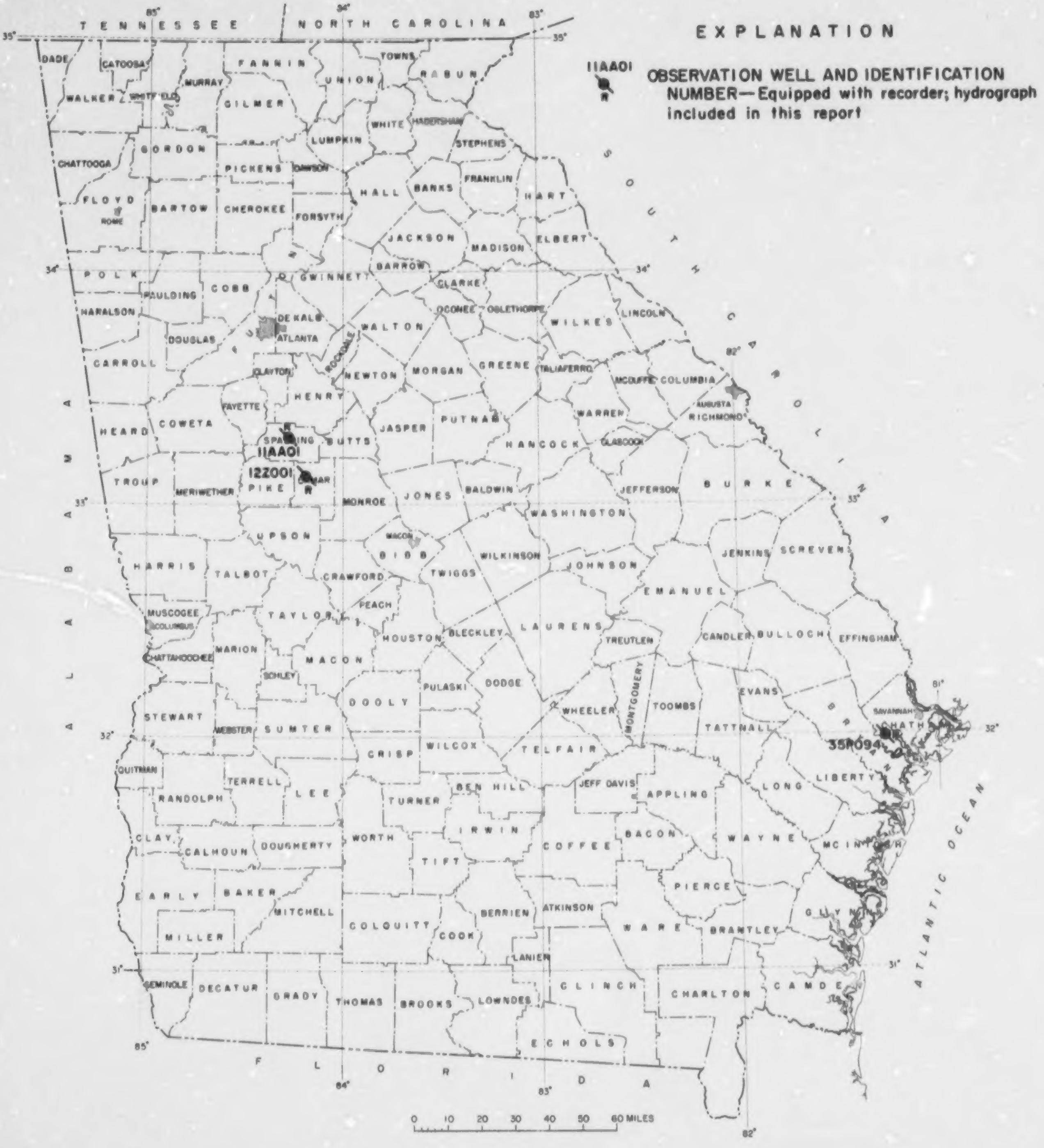

EXPLANATION
11AA01
OBSERVATION WELL AND IDENTIFICATION NUMBER—Equipped with recorder; hydrograph included in this report
TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
ALABAMA
FLORIDA
ATLANTIC OCEAN
11AA01
12Z001
35P094
ATLANTA
MACON
COLUMBUS
AUGUSTA
SAVANNAH
ROME
35°
34°
33°
32°
31°
85°
84°
83°
82°
81°
0 10 20 30 40 50 60 MILES
DADE
CATOOSA
WALKER
WHITFIELD
MURRAY
FANNIN
UNION
TOWNS
RABUN
GILMER
CHATTOOGA
GORDON
PICKENS
DAWSON
LUMPKIN
WHITE
HABERSHAM
STEPHENS
FLOYD
BARTOW
CHEROKEE
FORSYTH
HALL
BANKS
FRANKLIN
HART
JACKSON
MADISON
ELBERT
POLK
PAULDING
COBB
GWINNETT
BARROW
CLARKE
OCONEE
OGLETHORPE
WILKES
LINCOLN
HARALSON
DOUGLAS
DE KALB
FULTON
ROCKDALE
WALTON
CARROLL
CLAYTON
NEWTON
MORGAN
GREENE
TALIAFERRO
MCDUFFIE
COLUMBIA
HENRY
FAYETTE
HEARD
COWETA
SPALDING
BUTTS
JASPER
PUTNAM
WARREN
RICHMOND
HANCOCK
GLASCOCK
TROUP
MERIWETHER
PIKE
LAMAR
MONROE
JONES
BALDWIN
JEFFERSON
BURKE
WASHINGTON
UPSON
BIBB
WILKINSON
JOHNSON
JENKINS
SCREVEN
HARRIS
TALBOT
CRAWFORD
TWIGGS
EMANUEL
PEACH
MUSCOGEE
TAYLOR
HOUSTON
BLECKLEY
LAURENS
TREUTLEN
CANDLER
BULLOCH
EFFINGHAM
CHATTAHOOCHEE
MARION
SCHLEY
MACON
DODGE
MONTGOMERY
PULASKI
EVANS
STEWART
DOOLY
WHEELER
TOOMBS
WEBSTER
SUMTER
BRYAN
CHATHAM
TATTNALL
CRISP
WILCOX
TELFAIR
QUITMAN
RANDOLPH
TERRELL
LEE
TURNER
BEN HILL
JEFF DAVIS
APPLING
LONG
LIBERTY
CLAY
CALHOUN
DOUGHERTY
WORTH
IRWIN
COFFEE
BACON
WAYNE
TIFT
MCINTOSH
PIERCE
EARLY
BAKER
MITCHELL
COLQUITT
BERRIEN
ATKINSON
WARE
BRANTLEY
GLYNN
MILLER
COOK
LANIER
SEMINOLE
DECATUR
GRADY
THOMAS
BROOKS
LOWNDES
CLINCH
CHARLTON
CAMDEN
ECHOLS

Figure 2.3-1.—Locations of observation wells in the water-table aquifers.

11AA01 EXPERIMENT STATION SPALDING COUNTY

331507084171801 Local number, 11AA01.
LOCATION.--Lat 33°15'54", long 84°16'56", Hydrologic Unit 03070103, University of Georgia Experiment Station, Experiment, Ga.
Owner: University of Georgia.
AQUIFER.--Residuum.
WELL CHARACTERISTICS.--Dug unused water-table well, size 4 x 4 ft, depth 30 ft, open hole.
DATUM.--Altitude of land-surface datum is 960 ft.
Measuring point: Hole in floor of recorder shelter, 3.1 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--October 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.26 ft below land-surface datum, March 19, 1948; lowest, 21.78 ft below land-surface datum, December 13, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	16.38	15.15	13.61	11.29	11.13	12.87	14.27	16.11	17.57	18.27	19.10	17.64
2	16.23	14.89	13.66	11.18	11.15	12.96	14.31	16.17	17.60	18.31	19.12	17.49
3	16.12	14.85	13.67	11.35	11.14	12.97	14.37	16.22	17.64	18.33	19.13	17.24
4	15.99	14.78	13.63	11.48	11.26	13.01	14.40	16.27	17.67	18.35	19.14	16.92
5	15.79	14.65	13.58	11.48	11.38	13.09	14.42	16.33	17.69	18.38	19.18	16.61
6	15.65	14.43	13.49	11.50	11.47	13.13	14.49	16.37	17.71	18.44	19.22	16.25
7	15.55	14.43	13.31	11.45	11.49	13.18	14.59	16.38	17.73	18.48	19.25	16.04
8	15.48	14.41	13.21	10.89	11.48	13.21	14.64	16.43	17.74	18.52	19.28	15.79
9	15.43	14.32	13.20	9.74	11.59	13.29	14.65	16.49	17.77	18.55	19.29	15.63
10	15.37	14.21	13.17	9.43	11.69	13.37	14.69	16.54	17.79	18.59	19.29	15.52
11	15.33	14.28	13.19	9.45	11.73	13.40	14.78	16.58	17.82	18.60	19.35	15.25
12	15.41	14.36	13.18	9.61	11.75	13.44	14.84	16.62	17.84	18.62	19.39	15.03
13	15.39	14.28	13.18	9.76	11.79	13.49	14.91	16.69	17.86	18.66	19.41	14.84
14	15.33	14.13	13.18	9.87	11.85	13.54	14.96	16.76	17.91	18.70	19.43	14.65
15	15.32	14.14	13.19	9.99	11.89	13.58	15.00	16.81	17.96	18.71	19.39	14.66
16	15.33	14.07	13.15	10.18	11.92	13.66	15.06	16.86	17.98	18.72	19.34	14.66
17	15.33	14.03	13.11	10.24	12.07	13.74	15.14	16.91	18.00	18.74	19.27	14.58
18	15.43	14.03	13.16	10.22	12.12	13.78	15.20	16.95	18.04	18.75	19.21	14.50
19	15.47	14.01	13.27	10.42	12.16	13.85	15.26	17.00	18.07	18.78	19.14	14.44
20	15.42	14.08	13.18	10.58	12.19	13.90	15.33	17.06	18.08	18.80	19.04	14.47
21	15.37	14.03	13.07	10.71	12.22	13.95	15.38	17.11	18.05	18.83	19.01	14.46
22	15.42	13.87	13.05	10.77	12.24	13.99	15.43	17.18	18.09	18.84	18.93	14.39
23	15.37	13.81	12.92	10.62	12.31	13.97	15.49	17.24	18.11	18.82	18.79	14.40
24	15.38	13.75	12.74	10.66	12.40	13.95	15.56	17.31	18.12	18.87	18.66	14.45
25	15.34	13.77	12.69	10.82	12.44	13.96	15.62	17.34	18.13	18.92	18.55	14.49
26	15.31	13.81	12.44	10.89	12.50	14.04	15.70	17.35	18.13	18.93	18.38	14.50
27	15.27	13.73	11.73	10.92	12.59	14.10	15.80	17.38	18.15	18.97	18.19	14.48
28	15.30	13.56	11.54	10.97	12.63	14.12	15.87	17.39	18.18	19.01	18.01	14.38
29	15.25	---	11.48	11.03	12.64	14.16	15.93	17.43	18.21	19.02	17.90	14.40
30	15.22	---	11.40	11.07	12.68	14.22	15.99	17.48	18.23	19.05	17.78	14.41
31	15.25	---	11.29	---	12.77	---	16.04	17.52	---	19.08	---	14.29
MEAN	15.49	14.21	12.92	10.62	11.96	13.60	15.10	16.85	17.93	18.70	18.97	15.19

CAL YR 1983 MEAN 15.13 HIGH 9.43 LOW 19.43

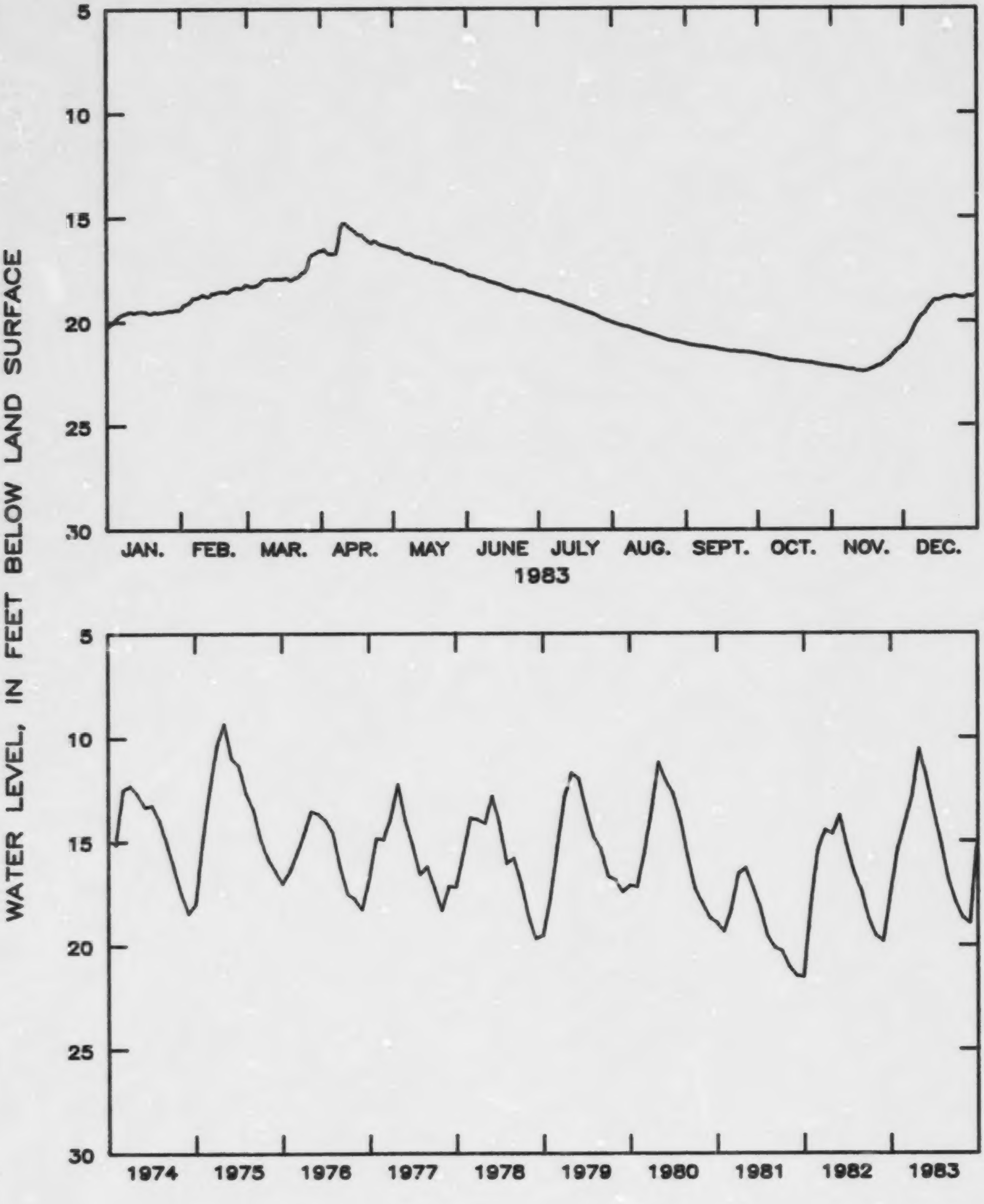


Figure 2.3–2.––Water level in observation well 11AA01, Spalding County.

330858084122901 Local number, 12Z001.
LOCATION.—Lat 33°08'58", long 84°12'29", Hydrologic Unit 03130005, north of Milner, Ga., at the gas storage center.
Owner: Dixie Pipeline Co.
AQUIFER.—Residuum.
WELL CHARACTERISTICS.—Bored observation well, diameter 24 in., depth 31 ft, cased to 31 ft.
DATUM.—Altitude of land-surface datum is 852 ft.
Measuring point: Floor of recorder shelter, 2.0 ft above land-surface datum.
REMARKS.—Water levels for periods of missing recorder record, January 1-6, May 21-22, 28-30, June 4-5, 25-26, July 2-4, 9-10, 14-15, August 13-14, 20-21, 27-28, September 3-5, 10-11, 17-18, 24-25, October 1-2, 8-9, 22-23, 29-30, November 6, 12-13, 19, 26-27, and December 4, 10-11, 13, 17-18, 23-26, were estimated.
PERIOD OF RECORD.—January 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level, 5.37 ft below land-surface datum, April 9, 1973; lowest, 15.20 ft below land-surface datum, December 1, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	9.09	8.41	7.37	6.12	6.71	8.48	9.79	10.90	11.55	11.58	12.37	10.31
2	8.96	8.20	7.40	6.04	6.76	8.52	9.68	10.88	11.58	11.61	12.61	9.97
3	8.87	8.05	7.44	6.12	6.78	8.64	9.58	10.89	11.61	11.01	12.62	9.68
4	8.77	8.00	7.46	6.28	6.84	8.58	9.46	10.93	11.63	11.65	12.64	9.43
5	8.59	7.94	7.42	6.35	6.94	8.56	9.32	10.96	11.64	11.11	12.65	9.18
6	8.47	7.82	7.34	6.37	7.04	8.68	9.88	10.98	11.65	11.76	12.58	9.12
7	8.39	7.76	7.18	6.36	7.12	8.66	9.93	10.88	11.69	11.90	12.50	9.00
8	8.39	7.80	7.04	6.15	7.14	8.74	10.03	10.75	11.73	11.92	12.53	8.96
9	8.42	7.83	7.04	5.72	7.22	8.76	10.01	10.68	11.77	11.92	12.55	8.63
10	8.47	7.81	7.08	5.50	7.31	8.80	10.03	10.64	11.77	11.94	12.58	8.65
11	8.52	7.86	7.16	5.48	7.37	8.84	10.09	10.69	11.78	11.97	12.65	8.51
12	8.59	8.00	7.23	5.54	7.41	8.86	10.14	10.89	11.78	11.99	12.65	8.42
13	8.70	8.06	7.28	5.62	7.46	8.90	10.18	10.92	11.72	12.21	12.64	8.36
14	8.80	7.94	7.34	5.68	7.52	8.94	10.19	10.94	11.80	12.18	12.62	8.30
15	8.83	7.80	7.40	5.76	7.56	8.98	10.19	10.95	11.84	12.18	12.46	8.41
16	8.87	7.70	7.44	5.88	7.59	9.04	10.21	10.99	11.94	12.17	12.29	8.57
17	8.94	7.62	7.43	5.96	7.68	9.10	10.32	11.02	11.93	11.99	12.16	8.57
18	9.01	7.62	7.40	6.29	7.76	9.14	10.36	11.60	11.95	12.02	11.89	8.56
19	9.10	7.67	7.45	6.23	7.78	9.18	10.40	11.20	11.95	12.04	12.11	8.58
20	9.18	7.74	7.40	6.12	7.80	9.22	10.42	11.20	11.76	12.06	12.29	8.69
21	9.20	7.80	7.31	6.22	7.85	9.26	10.45	11.20	11.60	12.10	12.22	8.70
22	9.20	7.70	7.26	6.34	7.88	9.28	10.48	11.21	11.37	12.11	11.95	8.94
23	9.14	7.58	7.15	6.44	7.97	9.29	10.52	11.25	11.21	12.09	11.88	8.93
24	9.00	7.51	7.02	6.36	8.02	9.50	10.57	11.29	11.22	12.14	11.74	8.97
25	8.90	7.47	6.92	6.28	8.07	9.47	10.61	11.33	11.22	12.40	10.90	8.99
26	8.84	7.52	6.76	6.37	8.20	9.51	10.65	11.42	11.22	12.50	10.84	8.99
27	8.72	7.52	6.42	6.48	8.32	9.53	10.70	11.44	11.49	12.24	10.73	8.95
28	8.66	7.42	6.26	6.56	8.34	9.59	10.75	11.43	11.32	12.32	10.65	8.79
29	8.63	---	6.32	6.61	8.40	9.60	10.80	11.46	11.38	12.31	10.83	8.80
30	8.58	---	6.29	6.66	8.42	9.64	10.83	11.49	11.56	12.33	10.60	8.79
31	8.52	---	6.21	---	8.39	---	10.87	11.51	---	12.34	---	8.65
MEAN	8.79	7.79	7.10	6.13	7.60	9.04	10.24	11.09	11.62	12.00	12.06	8.88

CAL YR 1983 MEAN 9.37 HIGH 5.48 LOW 12.65

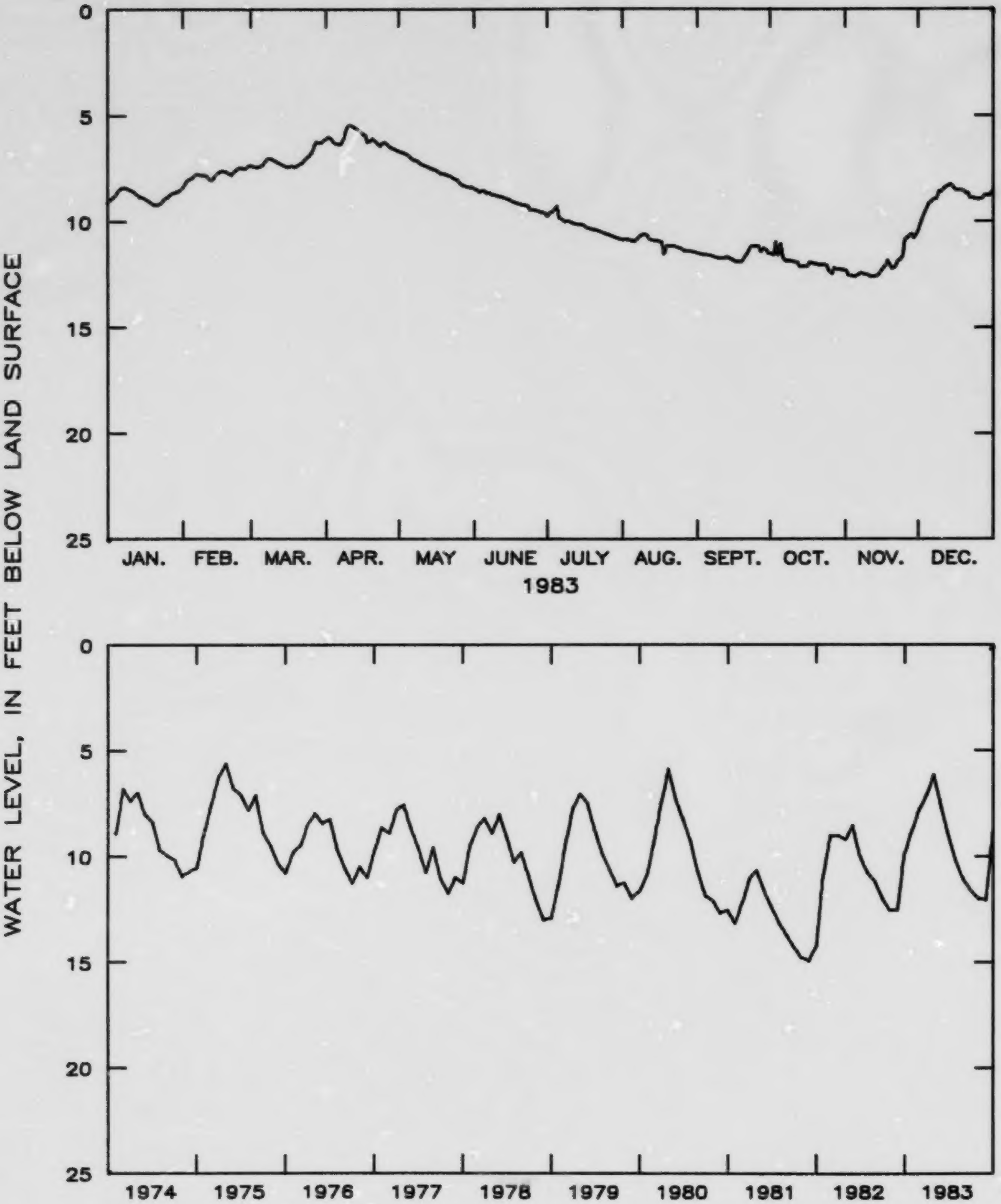


Figure 2.3–3.––Water level in observation well 12Z001, Lamar County.

315950081161201 Local number, 35P094.

LOCATION.--Lat 31°59'50", long 81°16'12", Hydrologic Unit 03060204, Barbour Lathrop Plant Introduction Station, 10 miles south of Savannah, north of the intersection of U.S. Highway 17 and Argyle Rd.

Owner: University of Georgia, formerly U.S. Department of Agriculture.

AQUIFER.--Sands of Holocene and Pleistocene age.

WELL CHARACTERISTICS.--Bored observation well, diameter 30 in., depth 15 ft, cased to 15 ft, open end.

DATUM.--Altitude of land-surface datum is 18.67 ft.

Measuring point: Iron bracket on recorder shelter, 3.3 ft above land-surface datum.

REMARKS.--Responds quickly to precipitation. Water levels for periods of missing recorder record, February 7-21, February 25 to March 22, March 23-28, April 1-3, June 1-2, July 4-5, August 7-27, and September 30 to December 18, were estimated.

PERIOD OF RECORD.--August 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.05 ft below land-surface datum, Sept. 26, 1953; lowest, 12.28 ft below land-surface datum, November 30, 1972.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8.36	4.02	2.43	2.27	2.67	5.34	6.59	6.98	9.03	9.64	11.18	9.79
2	8.06	3.86	2.36	2.42	2.78	5.47	6.24	7.05	9.08	9.72	11.26	9.87
3	7.80	3.68	2.29	2.57	2.90	5.56	6.13	7.06	9.12	9.80	11.34	9.95
4	7.50	3.73	2.22	2.72	2.86	5.67	6.21	7.08	9.15	9.88	11.42	10.03
5	7.28	3.79	2.15	2.78	2.96	5.80	6.30	7.15	9.19	9.82	11.46	10.05
6	7.12	3.80	2.17	2.86	3.10	5.91	6.38	7.24	9.61	9.90	11.51	10.02
7	7.05	3.79	2.07	2.92	3.21	6.00	6.53	7.33	8.33	9.98	11.59	9.96
8	7.02	3.74	2.03	2.96	3.31	6.08	6.67	7.41	8.26	10.06	11.55	9.90
9	6.80	3.68	1.99	2.26	3.41	6.17	6.81	7.50	8.30	10.14	11.39	9.98
10	6.30	3.62	1.95	1.86	3.50	6.27	6.94	7.59	8.35	10.22	11.09	10.06
11	5.82	3.56	1.93	2.10	3.59	6.36	7.14	7.68	8.41	10.30	10.93	10.14
12	5.62	3.51	1.91	2.35	3.69	6.45	7.32	7.76	8.48	10.37	10.77	10.09
13	5.56	3.45	1.89	2.53	3.78	6.56	7.46	7.85	8.54	10.35	10.73	10.04
14	5.54	3.39	1.87	2.66	3.87	6.67	7.60	7.96	8.62	10.22	10.69	9.99
15	5.55	3.33	1.85	2.28	3.96	6.78	7.71	8.02	8.69	10.30	10.65	9.93
16	5.62	3.27	1.87	2.02	4.05	6.92	7.81	8.11	8.77	10.38	10.51	9.78
17	5.68	3.21	1.89	2.32	4.15	7.05	7.91	8.20	8.85	10.46	10.37	9.76
18	5.79	3.15	1.91	2.48	4.24	7.17	8.01	8.28	8.92	10.54	10.45	9.74
19	5.87	3.10	1.93	2.55	4.30	7.30	8.12	8.37	9.00	10.62	10.53	9.61
20	5.88	3.04	1.95	2.73	4.30	7.42	8.23	8.46	9.08	10.70	10.61	9.26
21	5.56	2.98	1.98	2.86	4.35	7.51	8.32	8.55	9.15	10.78	10.57	8.90
22	4.85	2.92	2.00	2.95	4.41	7.51	8.40	8.63	9.20	10.86	10.53	8.62
23	4.60	2.74	2.04	1.75	4.50	7.49	8.18	8.72	9.24	10.82	10.49	8.40
24	4.47	2.75	2.07	.74	4.59	7.51	8.06	8.81	9.29	10.78	10.45	8.27
25	4.45	2.71	2.11	1.28	4.67	7.58	8.08	8.90	9.34	10.74	10.30	8.20
26	4.47	2.64	2.15	1.69	4.76	7.66	7.34	8.98	9.38	10.70	10.07	7.76
27	4.46	2.57	2.18	2.00	4.85	7.76	6.99	9.07	9.41	10.78	10.04	7.14
28	4.35	2.50	2.22	2.22	4.94	7.80	6.91	9.07	9.44	10.86	10.08	7.00
29	4.24	---	2.26	2.40	5.02	7.84	6.91	8.89	9.48	10.94	9.85	6.60
30	4.14	---	2.35	2.54	5.12	7.36	6.93	8.90	9.56	11.02	9.82	5.95
31	4.04	---	2.12	---	5.22	---	6.94	8.96	---	11.10	---	5.74
MEAN	5.80	3.30	2.07	2.34	3.97	6.77	7.26	8.08	8.98	10.41	10.74	9.05

CAL YR 1983 MEAN 6.58 HIGH .74 LOW 11.59

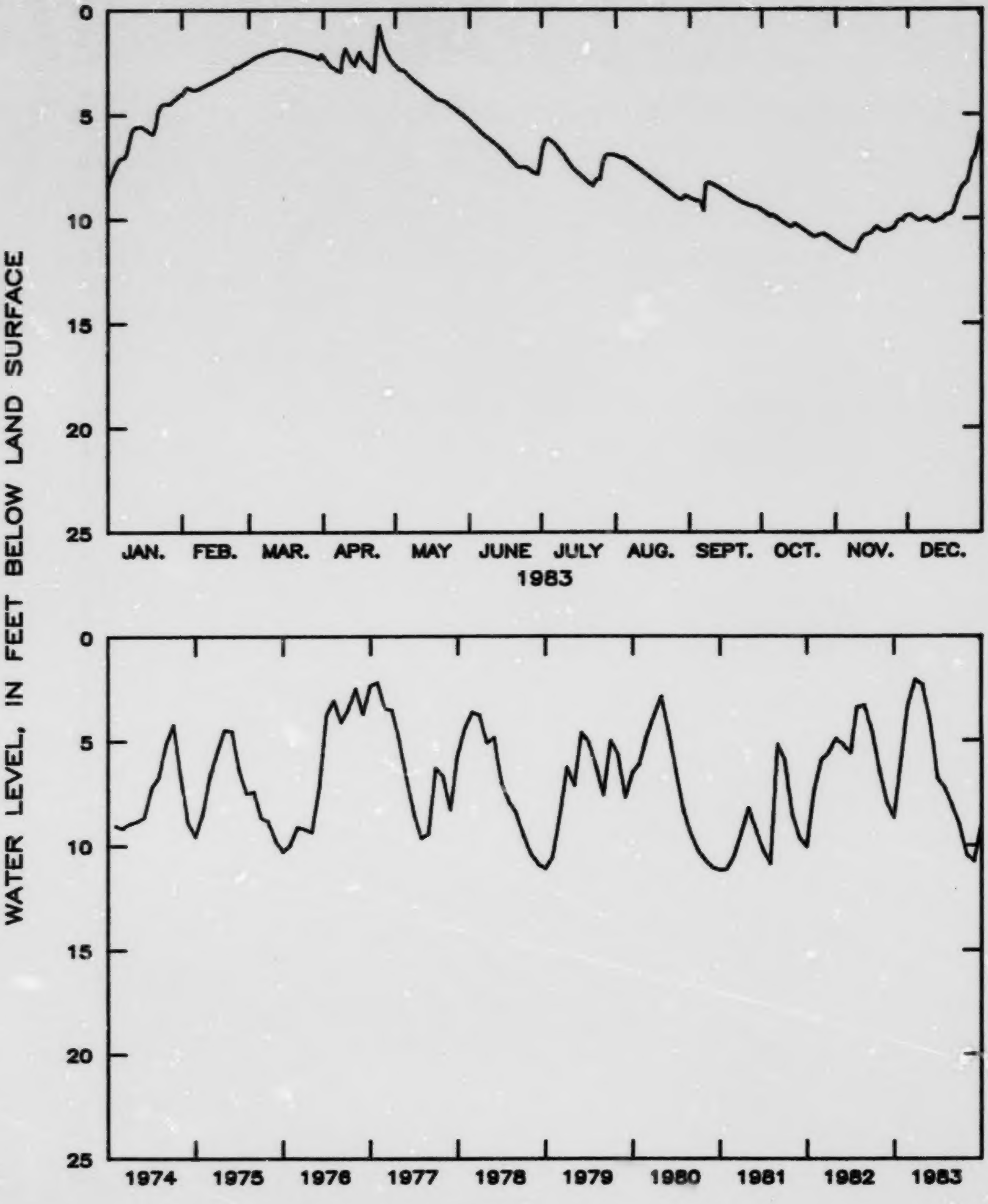


Figure 2.3-4.--Water level in observation well 35P094, Chatham County.

2.4 Cretaceous Aquifer System

The Cretaceous aquifer system in the Georgia Coastal Plain supplies more than 128 Mgal/d primarily for municipal and industrial use. The major source of recharge to the aquifer system is rainfall in areas where the individual aquifers intersect the land surface or underlie permeable surface material. Rainfall infiltrates the surface material and moves downgradient toward the southeast through the aquifer system. Most of the natural discharge from the aquifer system is into streams and rivers that cross the outcrop area. In general, water levels in the Cretaceous aquifer system declined during the period 1974-83. In east-central Georgia, the declines were greatest in Twiggs County, northwest Wilkinson County, and central Washington County, which are areas of heavy pumping associated with kaolin mining and processing. The long-term water-level declines in these areas during the period 1946-80 varied from 10 to 50 feet. The water level at well 28X001 in Burke County reached a new record low in November 1983.

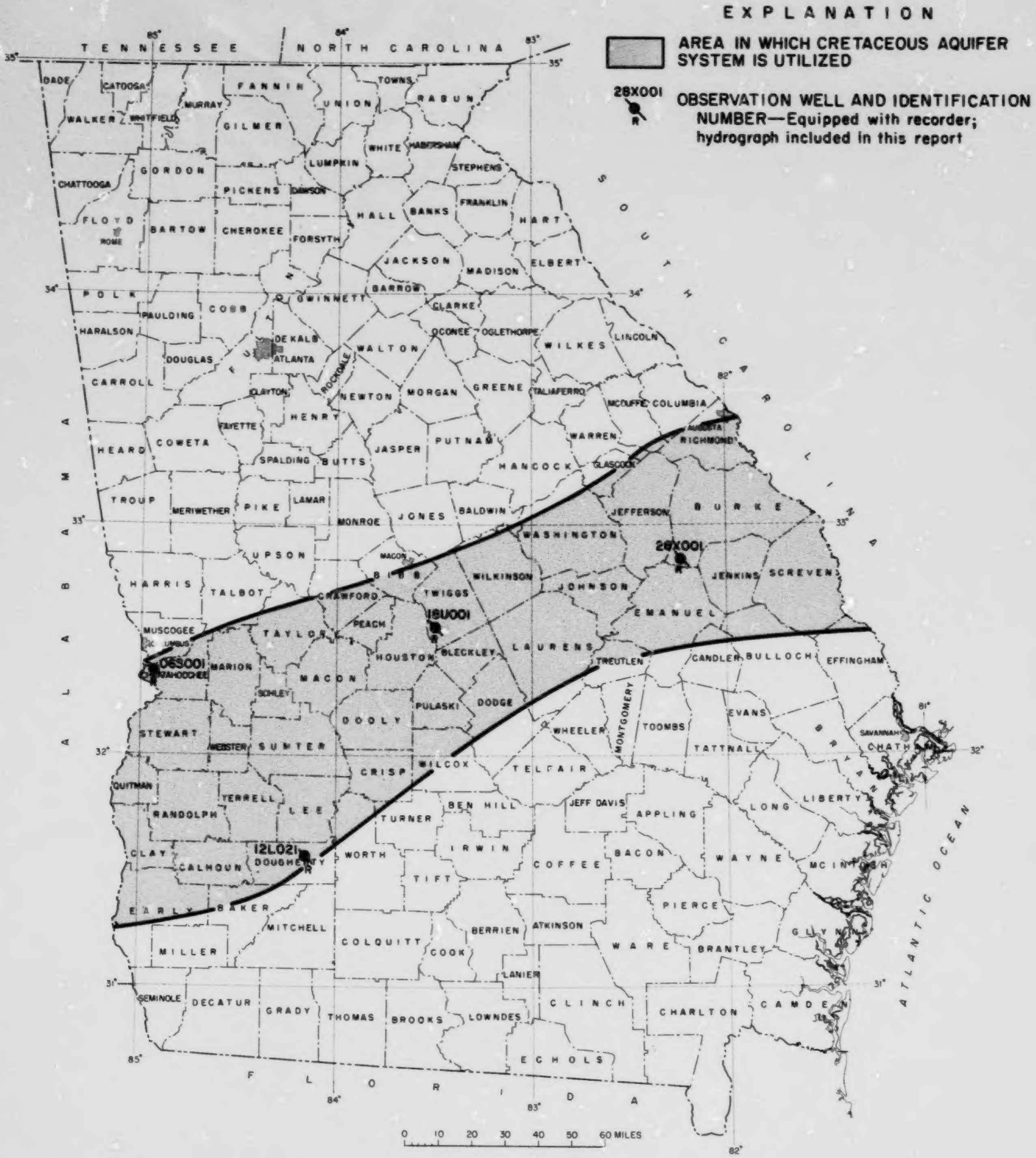

EXPLANATION
▨ AREA IN WHICH CRETACEOUS AQUIFER SYSTEM IS UTILIZED
28X001 R OBSERVATION WELL AND IDENTIFICATION NUMBER—Equipped with recorder; hydrograph included in this report
TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
ALABAMA
FLORIDA
ATLANTIC OCEAN
35°
34°
33°
32°
31°
85°
84°
83°
82°
81°
28X001
15U001
06S001
12L021
DADE
CATOOSA
WALKER
WHITFIELD
MURRAY
FANNIN
UNION
TOWNS
RABUN
GILMER
WHITE
HABERSHAM
STEPHENS
LUMPKIN
GORDON
CHATTOOGA
PICKENS
DAWSON
FRANKLIN
HART
HALL
BANKS
FLOYD
ROME
BARTOW
CHEROKEE
FORSYTH
JACKSON
MADISON
ELBERT
POLK
BARROW
GWINNETT
CLARKE
PAULDING
COBB
FULTON
HARALSON
DE KALB
ATLANTA
OCONEE
OGLETHORPE
WILKES
LINCOLN
DOUGLAS
WALTON
CARROLL
ROCKDALE
CLAYTON
NEWTON
MORGAN
GREENE
TALIAFERRO
MCDUFFIE
COLUMBIA
FAYETTE
HENRY
AUGUSTA
RICHMOND
HEARD
COWETA
SPALDING
BUTTS
JASPER
PUTNAM
WARREN
HANCOCK
GLASCOCK
TROUP
MERIWETHER
PIKE
LAMAR
MONROE
JONES
BALDWIN
JEFFERSON
BURKE
WASHINGTON
UPSON
MACON
BIBB
WILKINSON
28X001
HARRIS
TALBOT
CRAWFORD
TWIGGS
JOHNSON
JENKINS
SCREVEN
PEACH
EMANUEL
MUSCOGEE
COLUMBUS
TAYLOR
CHATTAHOOCHEE
MARION
HOUSTON
BLECKLEY
LAURENS
TREUTLEN
CANDLER
BULLOCH
EFFINGHAM
MACON
SCHLEY
PULASKI
DODGE
MONTGOMERY
EVANS
DOOLY
WHEELER
TOOMBS
STEWART
WEBSTER
SUMTER
SAVANNAH
CHATHAM
TATTNALL
WILCOX
TELFAIR
QUITMAN
CRISP
BRYAN
TERRELL
BEN HILL
JEFF DAVIS
APPLING
LIBERTY
RANDOLPH
LEE
TURNER
LONG
CLAY
CALHOUN
DOUGHERTY
WORTH
IRWIN
COFFEE
BACON
WAYNE
MCINTOSH
TIFT
EARLY
BAKER
PIERCE
MITCHELL
BERRIEN
ATKINSON
COLQUITT
WARE
BRANTLEY
GLYNN
MILLER
COOK
LANIER
SEMINOLE
DECATUR
GRADY
THOMAS
BROOKS
LOWNDES
CLINCH
CHARLTON
CAMDEN
ECHOLS
0 10 20 30 40 50 60 MILES

Figure 2.4-1.—Locations of observation wells in the Cretaceous aquifer system.

28X001 MIDVILLE EXPERIMENT STATION BURKE COUNTY

325232082131501 Local number, 28X001.

LOCATION.--Lat 32°52'32", long 82°13'15", Hydrologic Unit 03060201, 4.2 mi north of Midville off of State Highway 56 at Southeastern Experiment Station.
Owner: U.S. Geological Survey.

AQUIFER.--Upper Cretaceous.

WELL CHARACTERISTICS.--Drilled unused observation well, diameter 15 in., depth 1,045 ft, cased to 1,025 ft, screened.

DATUM.--Altitude of land-surface datum is 269 ft.
Measuring point: Floor of recorder platform, 3.04 ft above land-surface datum.

REMARKS.--Water levels for periods of missing recorder record, January 4 and March 7, 30, and 31, were estimated.

PERIOD OF RECORD.--June 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.07 ft below land-surface datum, June 4, 1980; lowest, 54.06 ft below land-surface datum, November 18, 1983.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	53.04	52.67	52.43	52.40	52.47	52.48	52.44	52.86	53.20	53.62	54.04	53.92
2	52.93	52.53	52.53	52.31	52.44	52.56	52.43	52.86	53.17	53.64	54.02	53.89
3	52.88	52.60	52.57	52.34	52.38	52.56	52.46	52.87	53.21	53.64	53.97	53.82
4	52.92	52.73	52.60	52.44	52.36	52.52	52.49	52.89	53.26	53.63	53.89	53.79
5	52.96	52.77	52.57	52.46	52.40	52.50	52.45	52.87	53.27	53.60	53.91	53.82
6	52.92	52.67	52.44	52.46	52.46	52.44	52.47	52.87	53.30	53.63	53.94	53.73
7	52.88	52.65	52.40	52.39	52.49	52.40	52.52	52.85	53.32	53.69	53.95	53.82
8	52.87	52.73	52.37	52.39	52.44	52.41	52.59	52.85	53.33	53.72	53.94	53.85
9	52.87	52.70	52.36	52.33	52.47	52.46	52.55	52.87	53.36	53.72	53.91	53.87
10	52.84	52.60	52.40	52.36	52.54	52.53	52.53	52.90	53.38	53.75	53.85	53.88
11	52.81	52.65	52.41	52.37	52.54	52.56	52.57	52.91	53.37	53.74	53.87	53.77
12	52.88	52.77	52.44	52.41	52.49	52.55	52.59	52.91	53.37	53.72	53.91	53.66
13	52.95	52.64	52.44	52.42	52.50	52.54	52.62	52.95	53.34	53.73	53.94	53.64
14	52.93	52.47	52.43	52.38	52.52	52.53	52.62	53.00	53.30	53.78	53.97	53.61
15	52.85	52.57	52.43	52.32	52.46	52.50	52.61	53.05	53.35	53.84	53.92	53.70
16	52.87	52.50	52.37	52.32	52.42	52.52	52.62	53.06	53.40	53.86	53.94	53.80
17	52.86	52.56	52.24	52.34	52.50	52.55	52.63	53.07	53.41	53.86	54.01	53.86
18	52.93	52.56	52.25	52.28	52.58	52.56	52.66	53.08	53.44	53.86	54.06	53.84
19	53.00	52.56	52.35	52.29	52.59	52.56	52.68	53.08	53.48	53.86	54.04	53.80
20	52.95	52.65	52.35	52.34	52.56	52.56	52.70	53.08	53.46	53.88	53.91	53.86
21	52.85	52.66	52.30	52.40	52.54	52.58	52.74	53.09	53.40	53.92	53.96	53.84
22	52.77	52.56	52.47	52.41	52.49	52.54	52.70	53.12	53.48	53.90	54.00	53.76
23	52.77	52.41	52.52	52.26	52.47	52.52	52.70	53.16	53.54	53.81	53.96	53.74
24	52.80	52.45	52.42	52.20	52.48	52.50	52.71	53.20	53.60	53.77	53.84	53.78
25	52.83	52.52	52.47	52.30	52.48	52.49	52.72	53.24	53.60	53.81	53.84	53.84
26	52.83	52.63	52.57	52.39	52.46	52.53	52.70	53.24	53.58	53.84	53.93	53.86
27	52.76	52.67	52.40	52.42	52.50	52.56	52.75	53.21	53.57	53.84	53.89	53.82
28	52.75	52.54	52.40	52.44	52.52	52.48	52.82	53.18	53.57	53.97	53.80	53.70
29	52.77	---	52.48	52.46	52.47	52.46	52.85	53.17	53.58	53.97	53.83	53.70
30	52.70	---	52.46	52.47	52.44	52.45	52.85	53.19	53.60	54.00	53.90	53.84
31	52.74	---	52.43	---	52.43	---	52.86	53.22	---	54.02	---	53.90
MEAN	52.86	52.61	52.43	52.37	52.48	52.51	52.63	53.03	53.41	53.79	53.93	53.80

CAL YR 1983 MEAN 52.99 HIGH 52.20 LOW 54.06

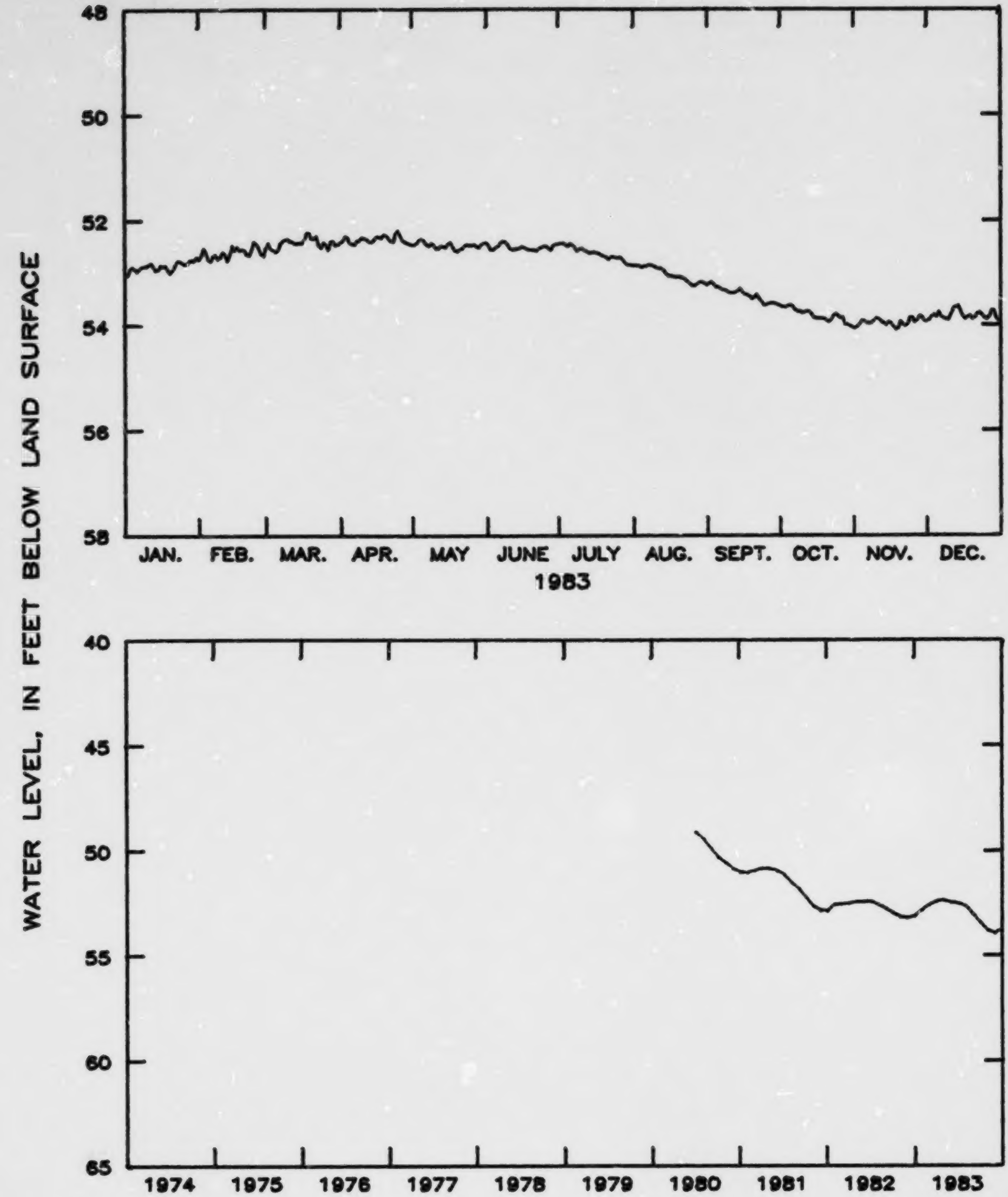


Figure 2.4-2.---Water level in observation well 28X001, Burke County.

18U001 TEST WELL 3 TWIGGS COUNTY

323302083263401 Local number, 18U001.
LOCATION.—Lat 32°33'02", long 83°26'34", Hydrologic Unit 03070104, 0.6 miles north of intersection of U.S. Highways 23 and 129 and Georgia Highway 96, turn left at Woods Road West. Well is 100 ft west of highway.
Owner: Georgia Kraft, USGS TW 3.
AQUIFER.—Upper Cretaceous.
WELL CHARACTERISTICS.—Drilled observation well, diameter 6 in., depth 590 ft, 3 in.; depth 586-616 ft, cased to 616 ft.
DATUM.—Altitude of land-surface datum is 420 ft.
Measuring point: Top of recorder shelter, 2.6 ft above land-surface datum.
REMARKS.—Borehole geophysical survey conducted.
PERIOD OF RECORD.—July 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level, 162.00 ft below land-surface datum, April 4, 1977; lowest, 165.64 ft below land-surface datum, October 5, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	163.51	163.28	162.93	162.73	162.86	163.18	163.71	164.29	164.38	164.19	164.30	163.58
2	163.38	163.19	163.00	162.67	162.83	163.26	163.70	164.27	164.35	164.16	164.27	163.54
3	163.37	163.27	163.05	162.72	162.78	163.28	163.71	164.27	164.38	164.18	164.22	163.44
4	163.43	163.37	163.08	162.81	162.77	163.27	163.72	164.24	164.41	164.16	164.14	163.39
5	163.42	163.40	163.02	162.88	162.82	163.28	163.69	164.23	164.38	164.13	164.13	163.42
6	163.37	163.28	162.97	162.91	162.88	163.28	163.68	164.20	164.39	164.18	164.15	163.33
7	163.31	163.22	162.97	162.88	162.93	163.52	163.72	164.14	164.38	164.23	164.15	163.41
8	163.26	163.24	162.92	162.84	162.88	163.51	163.80	164.13	164.37	164.25	164.15	163.37
9	163.25	163.23	162.89	162.77	162.92	163.55	163.82	164.12	164.37	164.26	164.11	163.34
10	163.22	163.13	162.88	162.82	162.97	163.60	163.81	164.14	164.36	164.26	164.04	163.31
11	163.22	163.20	162.92	162.77	163.00	163.62	163.82	164.13	164.32	164.23	164.04	163.17
12	163.28	163.29	162.95	162.67	162.98	163.59	163.84	164.10	164.29	164.19	164.09	163.05
13	163.36	163.20	162.96	162.60	162.99	163.58	163.88	164.10	164.24	164.20	164.10	163.07
14	163.35	163.04	162.98	162.58	162.99	163.57	163.90	164.14	164.21	164.25	164.09	163.04
15	163.32	163.11	162.97	162.57	162.99	163.56	163.90	164.18	164.25	164.28	164.03	163.15
16	163.33	163.08	162.93	162.61	162.96	163.58	163.91	164.19	164.25	164.28	164.06	163.23
17	163.33	163.03	162.83	162.65	163.03	163.61	163.92	164.19	164.25	164.26	164.12	163.25
18	163.48	163.03	162.90	162.62	163.10	163.64	163.96	164.21	164.26	164.23	164.13	163.24
19	163.55	163.05	162.94	162.65	163.10	163.68	163.97	164.23	164.28	164.21	164.09	163.22
20	163.52	163.12	162.92	162.72	163.08	163.72	164.00	164.23	164.24	---	163.94	163.28
21	163.42	163.16	162.94	162.78	163.07	163.74	164.03	164.25	164.19	---	163.91	163.30
22	163.38	163.06	163.06	162.80	163.02	163.73	164.01	164.27	164.23	---	163.95	163.25
23	163.39	162.99	163.07	162.66	163.01	163.74	164.01	164.30	164.27	---	163.89	163.23
24	163.42	163.00	162.97	162.61	163.02	163.74	164.00	164.36	164.29	---	163.76	163.28
25	163.44	163.08	163.03	162.71	163.04	163.72	164.01	164.41	164.28	---	163.72	163.35
26	163.42	163.18	163.07	162.81	163.04	163.74	164.02	164.43	164.24	---	163.76	163.35
27	163.37	163.15	162.92	162.85	163.08	163.74	164.09	164.44	164.20	164.21	163.70	163.31
28	163.40	163.07	162.94	162.84	163.13	163.73	164.17	164.44	164.19	164.27	163.57	163.18
29	163.40	---	163.00	162.86	163.12	163.71	164.22	164.43	164.18	164.27	163.57	163.20
30	163.37	---	162.92	162.86	163.10	163.71	164.26	164.44	164.18	164.23	163.59	163.33
31	163.37	---	162.80	---	163.12	---	164.27	164.43	---	164.31	---	163.39
MEAN	163.38	163.16	162.96	162.74	162.99	163.57	163.92	164.26	164.29	164.23	163.99	163.29

CAL YR 1983 MEAN 163.55 HIGH 162.57 LOW 164.44

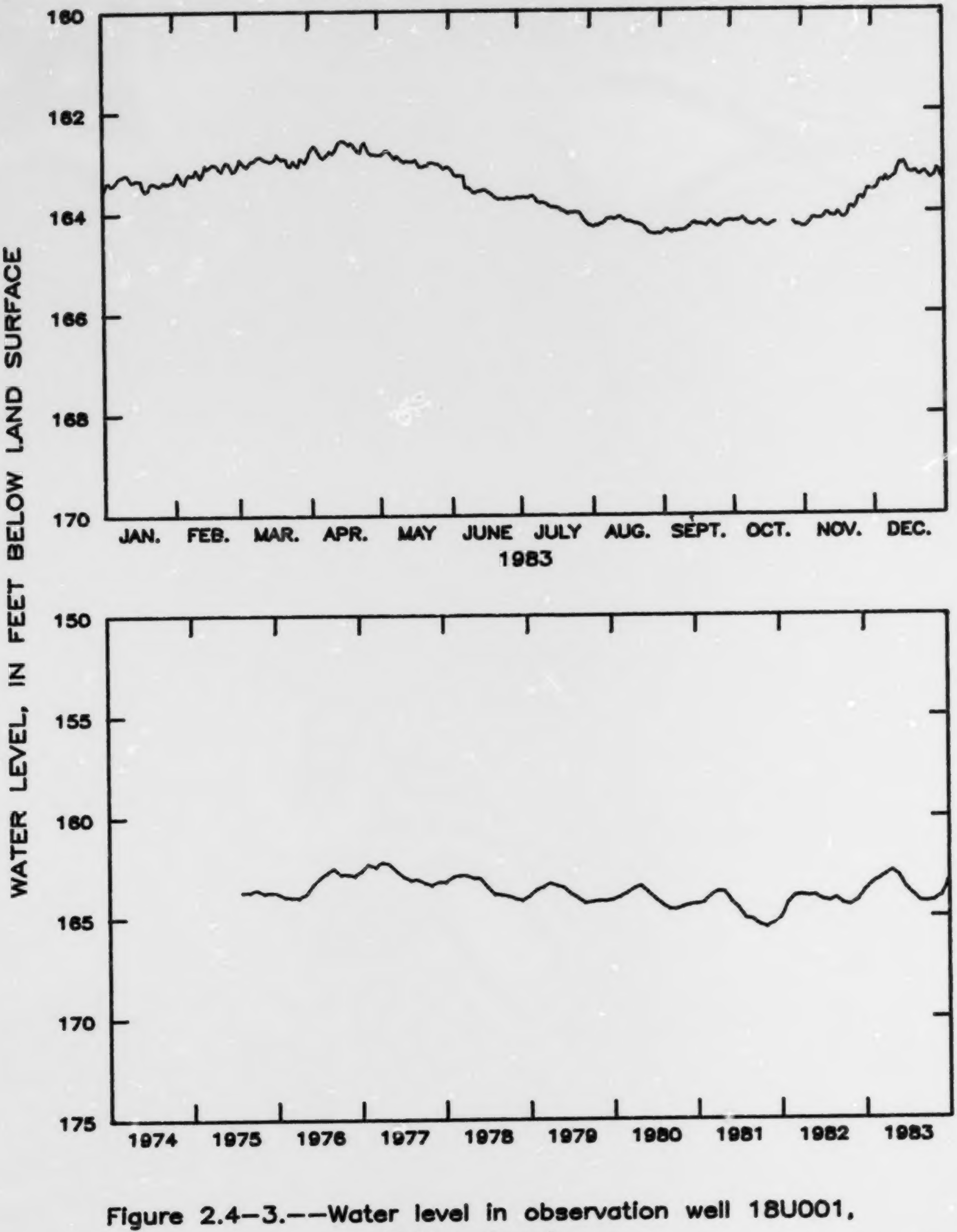


Figure 2.4-3.--Water level in observation well 18U001, Twiggs County.

068001 FORT BENNING CHATTAHOOCHEE COUNTY

322036084590301 Local number, 068001

LOCATION.--Lat 32°20'31", long 84°59'11", Hydrologic Unit 03130003, in "Motor Pool" across road from Lawson Airfield main building.

Owner: U.S. Army.

AQUIFER.--Blufftown and Eutaw Formations, and Tuscaloosa Formation.

WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in., depth 568 ft, screened interval 215-220 ft, 230-235 ft, 280-290 ft, 540-550 ft.

DATUM.--Altitude of land-surface datum is 255 ft.

Measuring point: Floor of recorder shelter, 2.80 ft above land-surface datum.

REMARKS.--Well pumped June 1978; water-quality sample collected at conclusion of pumping. Water levels for periods of missing recorder record, April 29 to May 5 and June 21 to July 29, were estimated.

PERIOD OF RECORD.--May 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.37 ft below land-surface datum, April 10, 1964; lowest, 29.73 ft below land-surface datum, September 10, 1958.

Water level, in feet below land surface, monthly mean values through 1975 and 1983 - periodic measurements, 1975-79

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	15.68	15.68	15.64	15.57	15.82	16.10	16.40	16.74	16.92	17.00	17.38	17.31
2	15.64	15.60	15.70	15.54	15.82	16.13	16.40	16.68	16.83	17.01	17.40	17.31
3	15.60	15.62	15.73	15.56	15.82	16.15	16.43	16.65	16.86	17.02	17.40	17.26
4	15.60	15.66	15.74	15.62	15.84	16.15	16.45	16.65	16.87	17.03	17.37	17.20
5	15.60	15.67	15.71	15.65	15.87	16.16	16.45	16.65	16.87	17.02	17.35	17.16
6	15.60	15.64	15.66	15.66	15.89	16.18	16.43	16.65	16.88	17.03	17.36	17.12
7	15.60	15.63	15.58	15.67	15.89	16.18	16.44	16.65	16.88	17.06	17.37	17.11
8	15.60	15.66	15.51	15.66	15.89	16.19	16.46	16.64	16.88	17.07	17.37	17.12
9	15.60	15.66	15.52	15.60	15.91	16.20	16.49	16.65	16.88	17.10	17.38	17.13
10	15.61	15.63	15.56	15.52	15.94	16.22	16.49	16.65	16.90	17.11	17.37	17.13
11	15.61	15.64	15.60	15.49	15.99	16.26	16.49	16.60	16.91	17.11	17.36	17.09
12	15.66	15.70	15.62	15.50	16.01	16.28	16.51	16.67	16.91	17.11	17.39	17.08
13	15.70	15.72	15.64	15.52	16.01	16.28	16.54	16.68	16.89	17.10	17.40	17.05
14	15.70	15.66	15.64	15.54	16.02	16.29	16.55	16.71	16.86	17.12	17.40	17.01
15	15.70	15.64	15.65	15.54	16.04	16.30	16.56	16.75	16.88	17.14	17.38	17.04
16	15.70	15.63	15.63	15.57	16.00	16.30	16.56	16.77	16.91	17.15	17.39	17.12
17	15.70	15.62	15.58	15.59	15.98	16.32	16.57	16.79	16.93	17.17	17.41	17.17
18	15.72	15.64	15.54	15.60	16.02	16.34	16.59	16.80	16.95	17.17	17.43	17.18
19	15.76	15.66	15.60	15.60	16.04	16.36	16.60	16.82	16.96	17.17	17.44	17.18
20	15.74	15.70	15.61	15.64	16.02	16.36	16.61	16.84	16.94	17.18	17.39	17.20
21	15.68	15.74	15.63	15.68	16.02	16.38	16.64	16.85	16.89	17.18	17.37	17.22
22	15.67	15.70	15.67	15.69	16.02	16.40	16.65	16.86	16.88	17.19	17.39	17.22
23	15.68	15.65	15.68	15.66	16.02	16.42	16.65	16.88	16.91	17.18	17.38	17.20
24	15.70	15.64	15.66	15.62	16.03	16.44	16.65	16.91	16.94	17.18	17.35	17.23
25	15.72	15.67	15.67	15.64	16.05	16.44	16.67	16.94	16.95	17.19	17.35	17.26
26	15.73	15.72	15.69	15.68	16.06	16.44	16.67	16.95	16.95	17.20	17.35	17.27
27	15.72	15.74	15.63	15.72	16.08	16.43	16.70	16.96	16.96	17.24	17.34	17.25
28	15.72	15.68	15.60	15.76	16.10	16.42	16.72	16.96	16.96	17.31	17.31	17.19
29	15.74	---	15.60	15.78	16.10	16.39	16.75	16.96	16.97	17.35	17.29	17.17
30	15.74	---	15.60	15.81	16.09	16.39	16.76	16.96	16.98	17.35	17.30	17.22
31	15.74	---	15.58	---	16.09	---	16.77	16.96	---	17.36	---	17.24
MEAN	15.68	15.66	15.63	15.62	15.98	16.30	16.57	16.78	16.91	17.15	17.37	17.18

CAL YR 1983 MEAN 16.41 HIGH 15.49 LOW 17.44

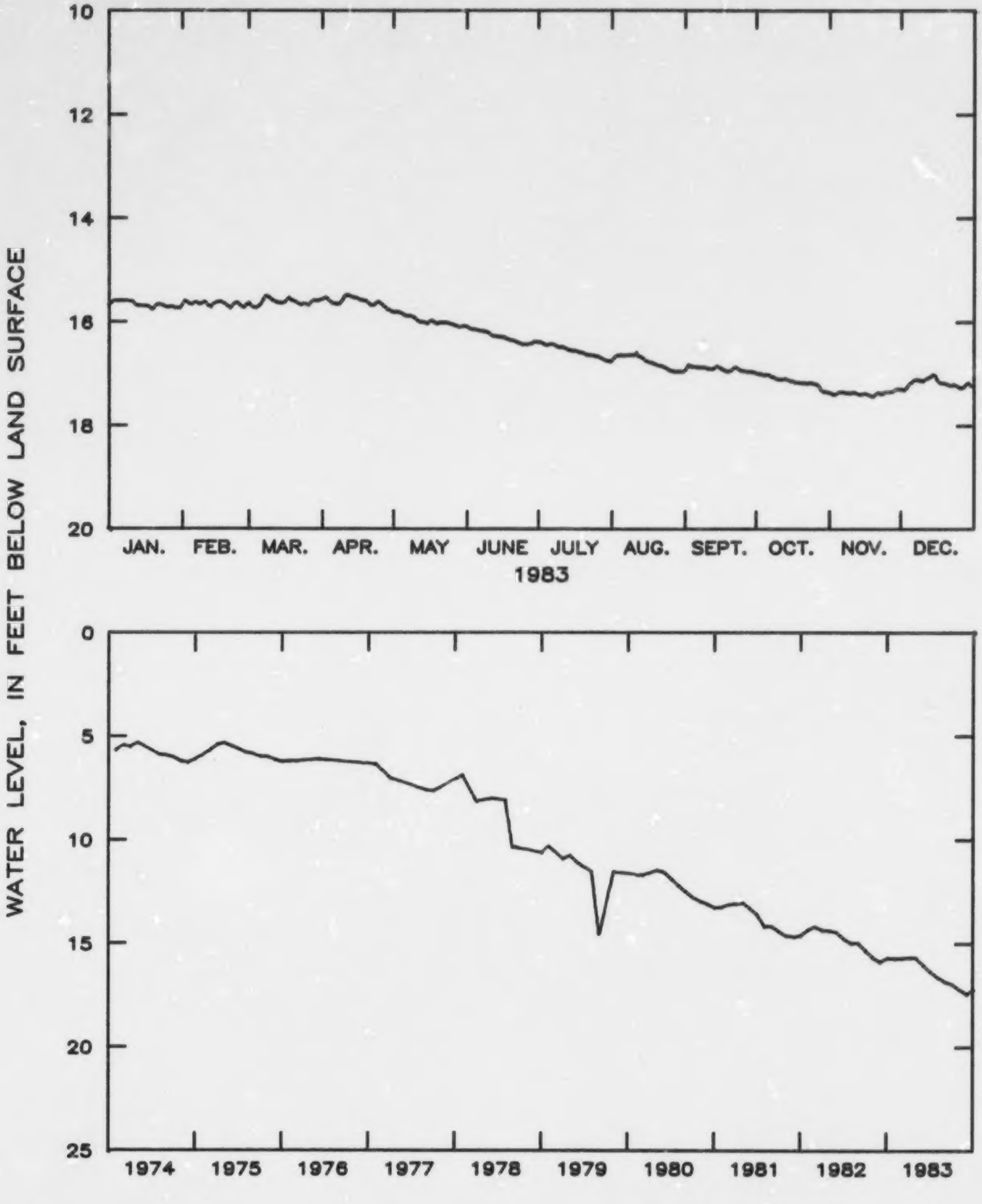
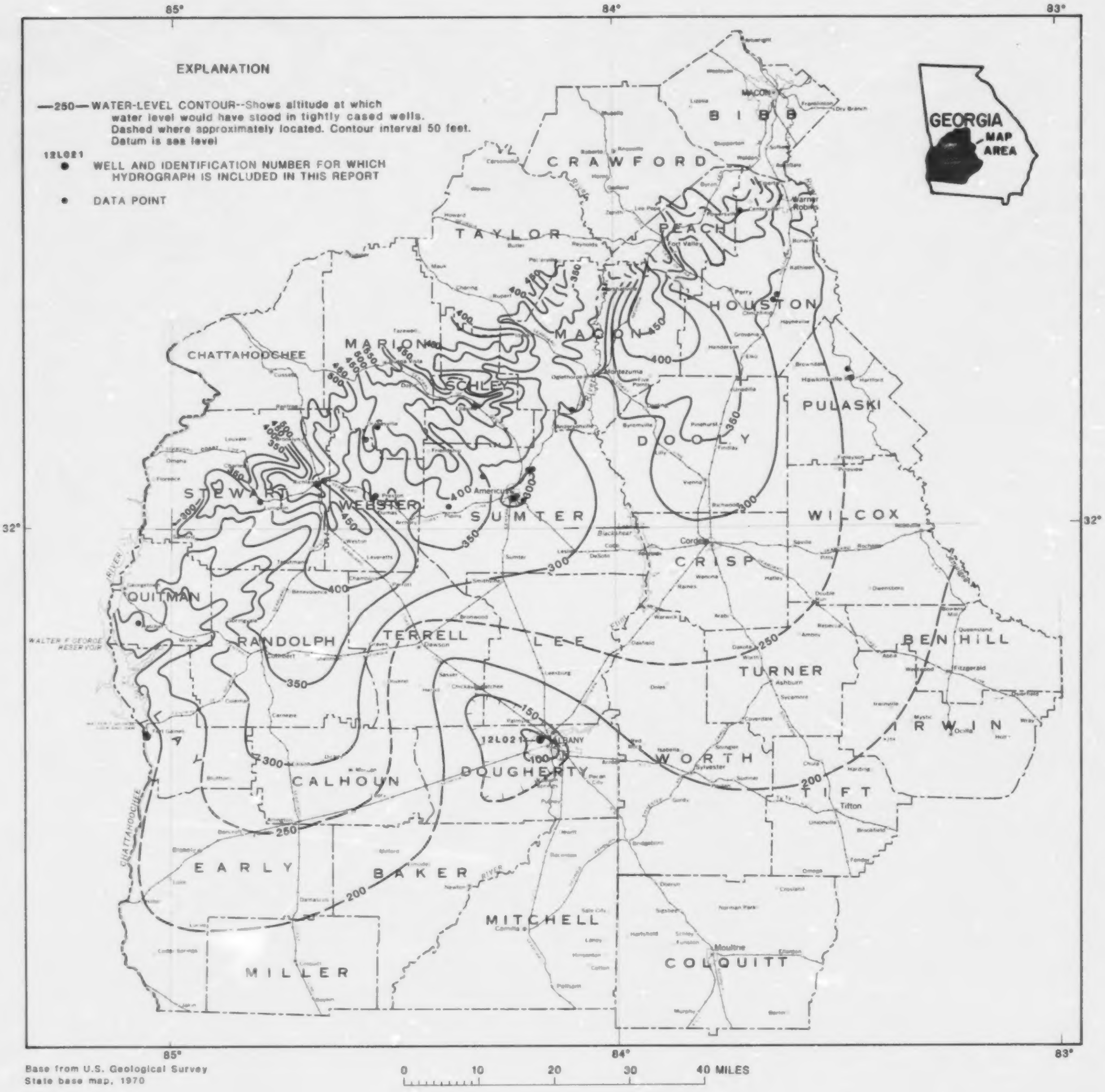


Figure 2.4-4.--Water level in observation well 06S001, Chattahoochee County.

2.4.1 Providence Aquifer

The Providence aquifer supplies about 9 Mgal/d for municipal, industrial, and agricultural users in southwest Georgia (Clarke and others, 1983). Water levels in the Providence aquifer are affected primarily by changes in local pumping. According to Clarke and others (1983), water levels in the aquifer near Albany declined more than 100 feet during the period 1950-80. From 1978-81, the mean annual water level at well 12L021 showed a downward trend and declined about 16 feet. The water level of the well recovered about 6 feet from 1981-83, reversing the downward trend.


EXPLANATION
—250— WATER-LEVEL CONTOUR--Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Contour interval 50 feet. Datum is sea level
12L021 ● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPH IS INCLUDED IN THIS REPORT
● DATA POINT
GEORGIA
MAP AREA
85°
84°
83°
32°
BIBB
CRAWFORD
TAYLOR
PEACH
HOUSTON
MACON
MARION
CHATTAHOOCHEE
SCHLEY
PULASKI
DOOLY
STEWART
WEBSTER
SUMTER
WILCOX
CRISP
QUITMAN
RANDOLPH
TERRELL
LEE
BEN HILL
TURNER
IRWIN
CALHOUN
DOUGHERTY
WORTH
TIFT
EARLY
BAKER
MITCHELL
MILLER
COLQUITT
Macon
Warner Robins
Fort Valley
Montezuma
Americus
Cordele
Albany
Tifton
Moultrie
Camilla
12L021
WALTER F GEORGE RESERVOIR
CHATTAHOOCHEE
100
150
200
250
300
350
400
450
500
0 10 20 30 40 MILES

Base from U.S. Geological Survey State base map, 1970

Figure 2.4.1-1—Location of observation well 12L021 and the water level in the Providence aquifer, October 1983.

12L021 TEST WELL 10 DOUGHERTY COUNTY

313534084103003 Local number, 12L021.

LOCATION.--Lat 31°35'34", long 84°10'30", Hydrologic Unit 03130008, located in part at intersection of Slappey Drive and Fifth Avenue.

Owner: U.S. Geological Survey, test well 10.

AQUIFER.--Providence (Upper Cretaceous).

WELL CHARACTERISTICS.--Drilled unused observation well, depth 1,346 ft, cased to 797 ft.

DATUM.--Altitude of land-surface datum is 198 ft.

Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.

REMARKS.--Water levels for periods of missing recorder record, January 1-2, February 2, 3, 14-28, and March 1 and 2, were estimated.

PERIOD OF RECORD.--December 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 103.62 ft below land-surface datum, March 19, 1979; lowest, 144.99 ft below land-surface datum, August 11, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	131.68	125.29	125.20	122.31	120.62	125.91	128.43	134.68	136.97	133.75	132.89	127.50
2	130.77	125.59	125.06	121.93	120.40	126.44	128.40	134.68	137.42	134.09	133.12	126.83
3	129.87	125.43	124.68	121.14	120.57	126.86	128.68	134.43	137.80	133.77	133.25	126.00
4	130.08	125.24	124.57	120.05	121.02	127.03	128.52	134.22	138.12	133.25	132.60	125.33
5	130.34	126.07	124.63	119.59	121.50	126.80	128.24	134.43	138.02	132.65	131.51	124.56
6	130.32	126.32	124.45	119.45	121.53	127.05	127.95	134.35	137.81	132.50	131.12	124.68
7	129.98	126.87	123.89	119.87	121.45	127.57	127.84	133.80	137.58	132.52	131.00	124.64
8	129.68	127.33	123.62	120.14	121.30	128.04	128.10	133.94	137.79	132.57	130.93	124.55
9	129.70	126.67	123.52	120.08	120.75	128.41	128.08	133.92	137.67	132.75	130.77	125.02
10	129.92	126.42	123.50	119.54	120.50	128.72	128.08	133.57	137.25	133.19	130.52	125.33
11	129.62	126.91	123.83	118.60	120.28	128.41	127.60	133.73	136.95	133.12	130.40	125.35
12	129.18	127.02	124.15	118.60	120.24	127.50	127.51	133.87	136.54	133.00	130.54	125.25
13	129.43	126.67	124.58	118.60	120.45	126.75	127.42	133.80	136.27	133.35	130.57	125.07
14	129.72	126.62	124.40	119.08	120.59	126.60	128.30	133.73	136.04	133.78	130.68	124.60
15	129.50	127.22	124.28	118.98	120.57	126.62	128.68	134.13	135.90	133.81	130.35	124.19
16	129.12	126.80	124.67	119.17	120.98	126.70	129.15	134.26	135.76	133.67	130.15	124.14
17	128.80	126.33	124.94	119.65	121.37	126.81	129.25	134.13	135.83	133.52	130.15	123.94
18	128.48	126.27	125.26	120.23	121.57	126.94	129.27	134.38	136.07	133.31	130.01	123.19
19	128.68	126.28	124.72	120.73	121.77	127.00	129.37	134.66	136.75	132.73	129.74	121.89
20	128.95	125.99	122.98	121.19	122.07	127.07	129.69	134.70	136.65	132.62	129.78	121.99
21	129.00	125.38	121.76	121.15	122.32	127.13	130.03	134.13	135.42	132.52	130.25	122.25
22	128.79	125.72	122.30	121.22	122.56	126.96	130.40	133.12	135.61	132.47	130.52	122.45
23	128.03	125.75	122.30	120.96	123.08	127.23	130.07	133.37	135.91	132.65	129.97	122.98
24	127.52	125.97	121.60	120.35	123.34	127.28	129.75	133.83	135.77	133.02	129.40	123.50
25	126.81	126.38	121.70	120.67	123.35	126.88	129.65	134.40	135.34	133.35	129.62	123.95
26	126.38	126.74	122.19	120.64	123.34	126.50	130.42	134.97	135.00	133.60	129.83	124.27
27	125.97	126.44	122.30	120.39	123.39	126.38	131.52	135.28	134.31	133.33	129.83	124.95
28	125.93	125.57	122.80	120.36	123.61	126.92	132.52	135.57	134.06	133.08	129.40	124.92
29	125.93	---	123.29	120.65	124.07	127.61	133.35	135.98	134.27	133.22	128.92	125.42
30	125.87	---	123.55	120.75	124.67	128.18	133.83	136.57	133.73	133.31	128.10	125.83
31	125.75	---	122.63	---	125.25	---	134.25	136.73	---	133.02	---	126.13
MEAN	128.70	126.26	123.66	120.20	121.89	127.14	129.50	134.43	136.29	133.15	130.53	124.54

CAL YR 1983 MEAN 128.03 HIGH 118.60 LOW 138.12

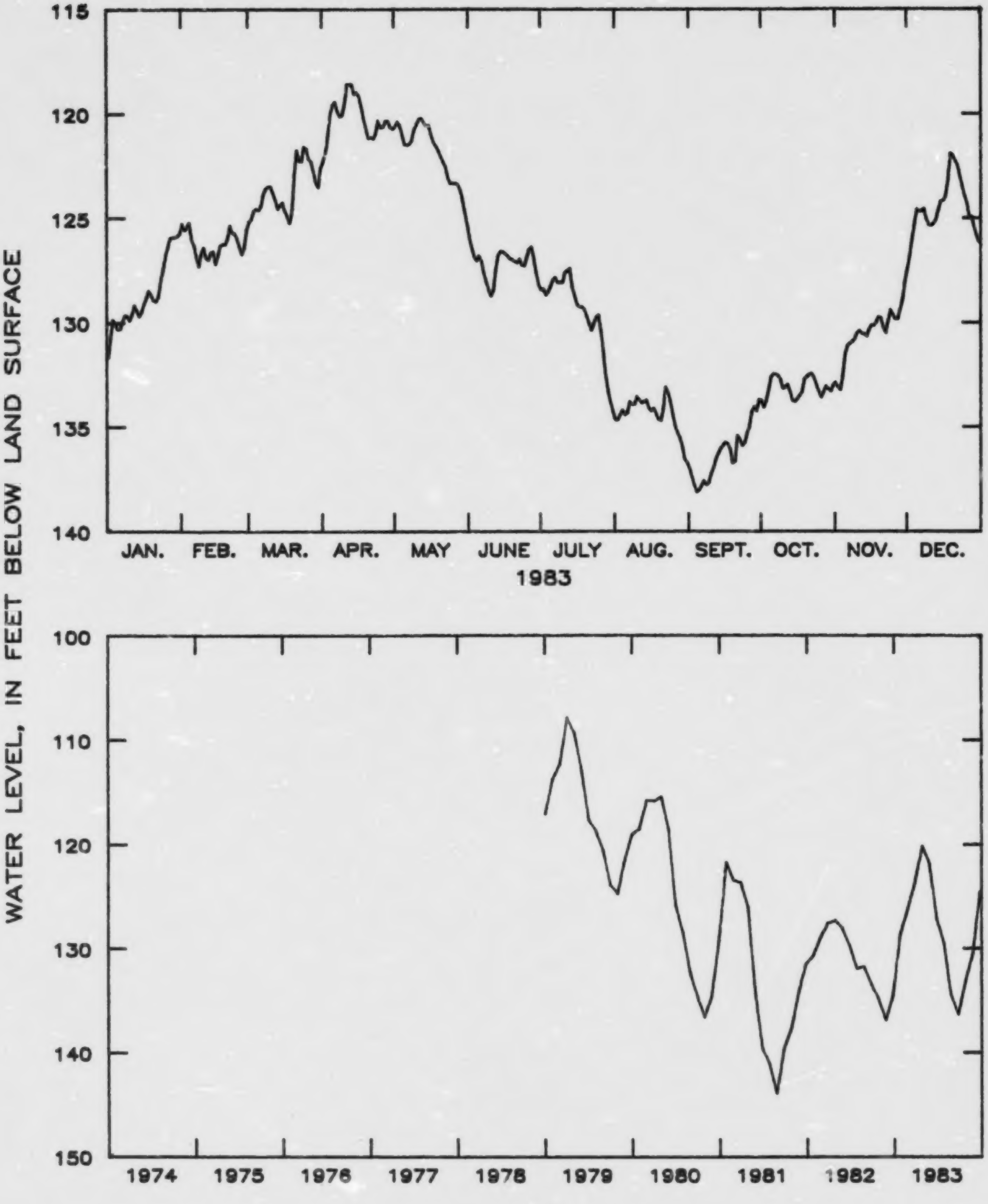
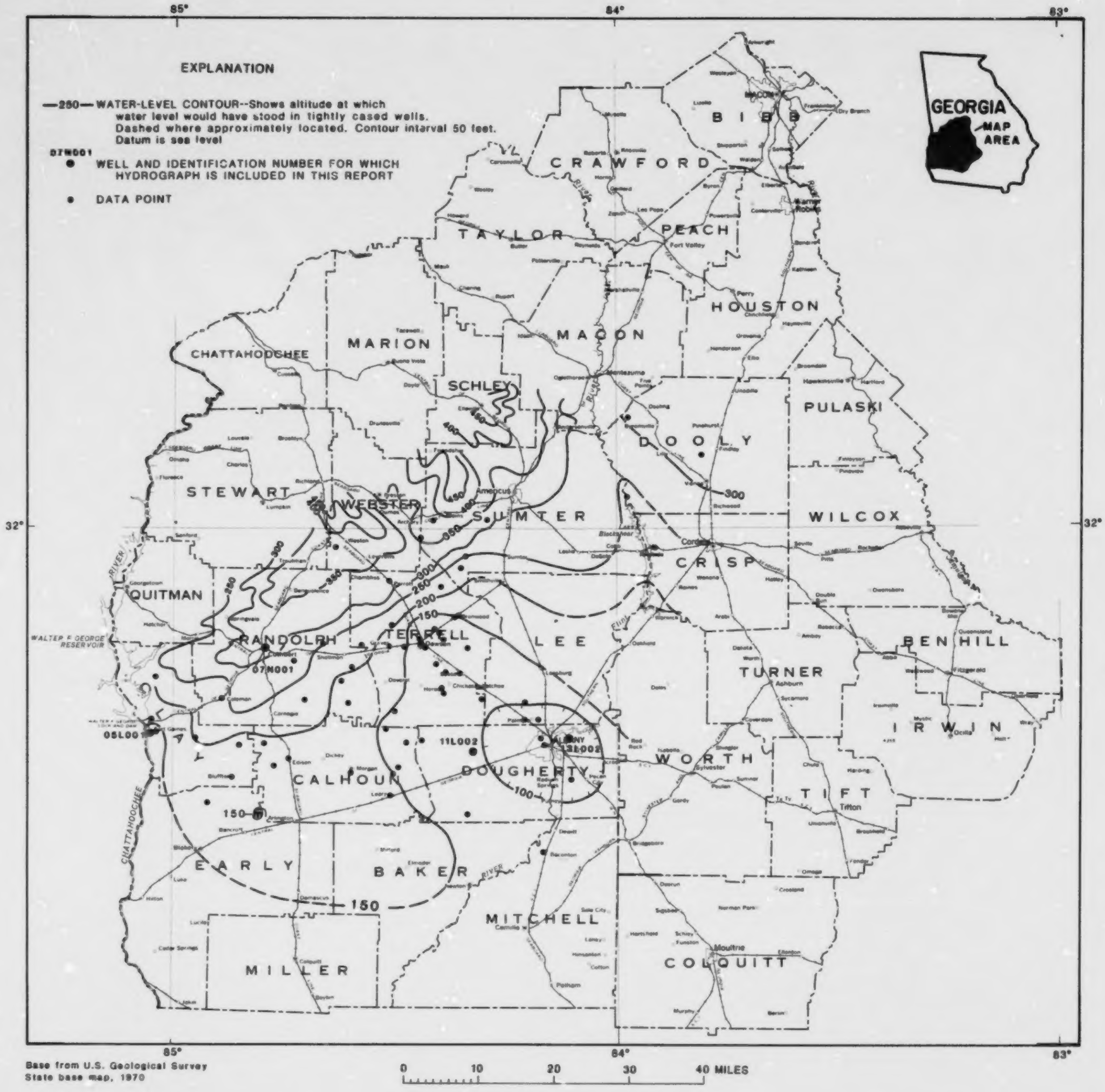


Figure 2.4.1-2--Water level in observation well 12L021, Dougherty County.

2.5 Clayton Aquifer

The Clayton aquifer supplies more than 20 Mgal/d for municipal and agricultural use in the area between the Chattahoochee and Flint Rivers in southwest Georgia (Clarke and others, 1984).

Water levels declined as much as 53 feet in some areas during the period 1976-81 because of increased irrigation pumping. Above-normal precipitation during 1982-83 resulted in reduced irrigation pumping and water levels began to recover. Mean annual water levels were as much as 8.9 feet higher in 1983 than in 1982.


EXPLANATION
—250— WATER-LEVEL CONTOUR--Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Contour interval 50 feet. Datum is sea level
07N001 ● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPH IS INCLUDED IN THIS REPORT
• DATA POINT
GEORGIA
MAP AREA
85°
84°
83°
32°
BIBB
CRAWFORD
TAYLOR
PEACH
HOUSTON
MACON
MARION
CHATTAHOOCHEE
SCHLEY
DOOLY
PULASKI
STEWART
WEBSTER
SUMTER
WILCOX
CRISP
QUITMAN
RANDOLPH
TERRELL
LEE
BEN HILL
TURNER
IRWIN
CALHOUN
DOUGHERTY
WORTH
TIFT
EARLY
BAKER
MITCHELL
MILLER
COLQUITT
WALTER F. GEORGE RESERVOIR
CHATTAHOOCHEE RIVER
07N001
05L001
11L002
13L002
450
400
350
300
250
200
150
100
Macon
Americus
Cordele
Albany
Moultrie
Tifton
0 10 20 30 40 MILES

Base from U.S. Geological Survey State base map, 1970

Figure 2.5-1.—Observation well locations and the water level in the Clayton aquifer, October 1983.

05L001 W. F. GEORGE DAM CLAY COUNTY

313637085032601 Local number, 05L001.
LOCATION.--Lat 31°36'37", long 85°03'26", Hydrologic Unit 03130004, between Chattahoochee River and Fort Gaines waterplant.
Owner: U.S. Army Corps of Engineers.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 120 ft, cased to 44 ft, open hole.
DATUM.--Altitude of land-surface datum is 146.7 ft.
Measuring point: Top of floor of recorder shelter, 2.7 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, May 18 to October 5 and November 2-20, were estimated.
PERIOD OF RECORD.--May 23, 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.86 ft below land-surface datum, February 17, 1966; lowest, 35.95 ft below land-surface datum, February 14, 1961.

Water level, in feet below land surface, calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	29.35	29.63	28.03	26.07	28.28	29.83	27.91	30.67	30.56	30.55	30.29	29.52
2	30.13	28.50	28.95	26.00	28.09	28.71	27.81	30.65	30.74	30.25	30.16	29.44
3	29.70	28.89	28.97	26.07	27.80	29.83	28.68	30.66	30.79	29.95	30.13	29.53
4	28.48	28.93	28.70	26.13	27.68	29.64	29.55	30.66	30.83	29.65	30.08	29.62
5	28.71	29.04	28.43	26.12	27.72	29.44	29.54	30.54	30.88	30.22	30.02	28.66
6	28.67	29.82	27.97	26.81	27.73	29.25	29.51	30.42	30.89	29.63	29.97	28.13
7	28.61	29.23	28.07	26.82	28.49	29.05	29.46	30.30	30.91	30.07	29.44	27.71
8	29.13	29.18	28.33	26.13	28.65	28.86	29.45	30.18	29.82	30.37	29.48	27.68
9	29.91	29.11	26.80	24.71	28.48	28.87	29.45	30.06	29.72	30.51	29.40	27.73
10	29.51	28.97	26.87	23.41	28.36	28.82	29.44	30.04	29.86	30.10	29.39	27.99
11	29.45	28.65	26.85	23.45	28.33	28.94	29.44	28.61	29.99	29.94	29.47	27.85
12	29.52	28.83	27.47	24.86	28.34	29.05	29.43	28.60	30.13	29.72	29.55	26.70
13	29.51	29.07	27.67	25.46	28.38	29.17	29.43	28.60	30.10	29.80	29.63	26.49
14	29.45	29.35	27.53	25.55	28.85	29.16	29.40	28.59	30.09	29.87	29.62	26.97
15	30.02	29.30	27.36	25.58	29.01	29.15	29.37	28.58	30.05	30.30	29.94	28.05
16	30.30	28.88	27.38	25.67	28.46	29.25	29.79	29.36	30.04	30.46	29.87	27.57
17	29.83	28.87	27.31	25.67	28.89	29.06	30.21	30.15	30.04	30.10	29.81	28.31
18	29.80	29.10	27.38	25.62	28.66	29.62	30.63	30.13	29.93	29.99	30.08	28.34
19	29.81	29.26	27.63	26.19	28.67	30.18	30.63	30.11	29.83	29.97	30.36	28.26
20	29.75	29.44	27.85	26.50	28.64	30.74	30.62	29.80	29.72	29.93	29.62	28.27
21	29.67	29.60	26.94	26.59	28.56	30.74	30.59	29.50	30.03	29.93	30.61	28.29
22	29.80	29.66	27.53	26.61	28.49	30.73	30.53	29.19	30.00	30.35	30.65	28.23
23	29.85	29.72	27.32	25.73	28.40	30.64	30.48	28.87	29.98	30.47	30.61	28.23
24	29.62	28.56	27.23	26.45	28.42	30.72	30.42	28.58	29.96	30.14	30.58	28.71
25	29.53	28.06	27.30	26.55	28.41	30.44	30.36	28.78	29.96	30.02	30.58	28.64
26	30.18	28.04	27.51	26.48	28.37	30.16	30.36	28.78	29.95	30.03	30.85	28.62
27	29.65	28.03	25.67	27.06	28.33	29.86	30.38	29.54	29.95	30.03	30.83	28.55
28	29.54	28.02	24.25	27.47	28.83	29.61	30.36	30.12	29.92	30.08	30.32	28.15
29	30.38	---	24.55	27.63	29.34	27.60	30.29	30.79	29.93	30.32	30.03	27.42
30	30.58	---	25.96	28.08	29.85	27.93	30.42	30.58	30.63	30.57	29.61	27.47
31	30.01	---	26.06	---	29.85	---	30.54	30.57	---	30.38	---	27.42
MEAN	29.63	28.99	27.29	26.05	28.53	29.50	29.82	29.74	30.17	30.12	30.03	28.15

CAL YR 1983 MEAN 29.00 HIGH 23.41 LOW 30.91

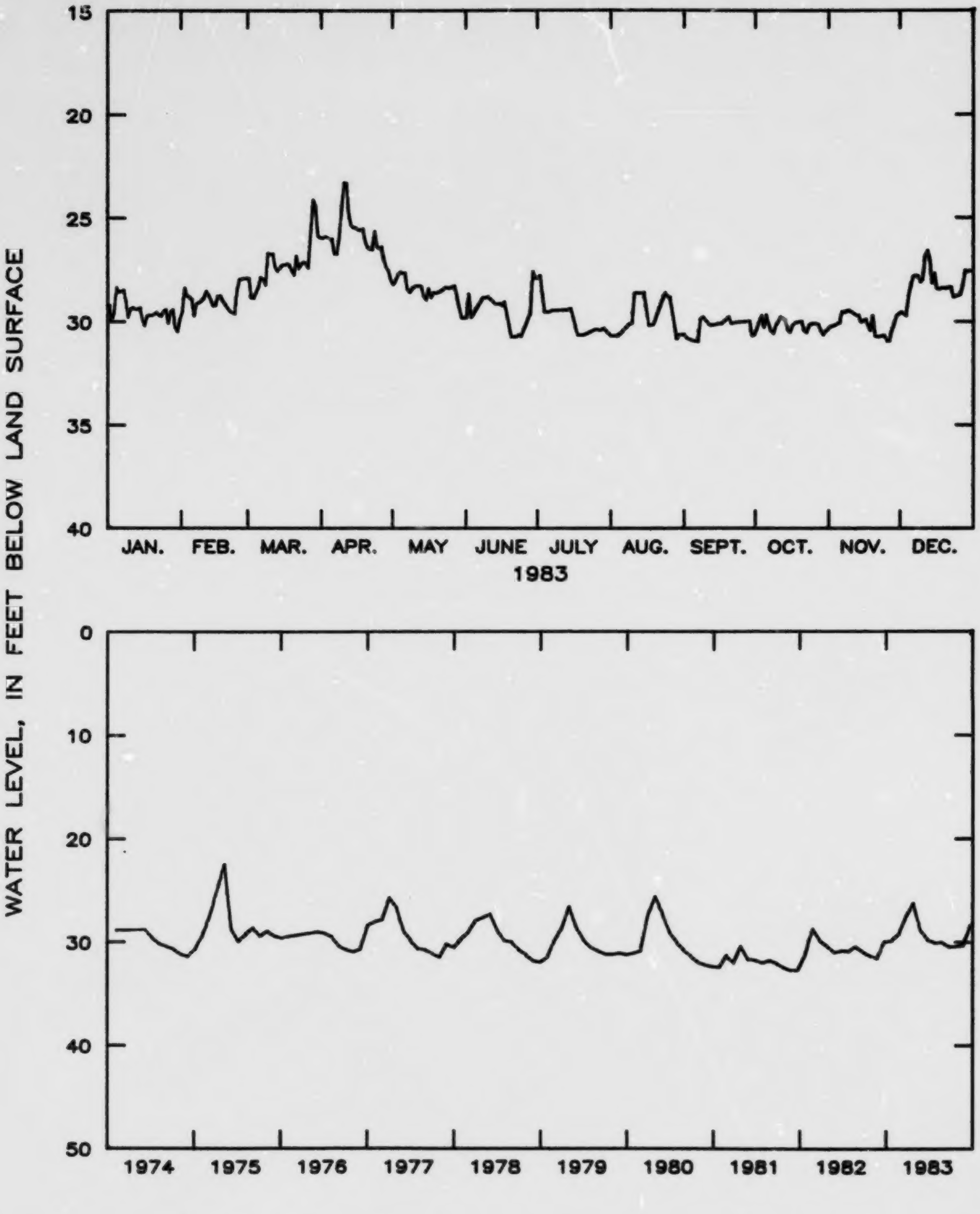


Figure 2.5—2.——Water level in observation well 05L001, Clay County.

07N001 CUTHBERT RANDOLPH COUNTY

314602084473701 Local number, 07N001.

LOCATION.--Lat 31°46'09", long 84°47'43", Hydrologic Unit 03110204, south of intersection of College and Andrew Streets, near electric substation.

Owner: City of Cuthbert.

AQUIFER.--Clayton.

WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 8 in., depth 372 ft, casing depth unknown.

DATUM.--Altitude of land-surface datum is 460 ft.

Measuring point: Floor of recorder shelter, 3.30 ft above land-surface datum.

REMARKS.--Well pumped and sounded June 22, 1978, to a depth of 372 ft; water-quality sample collected at conclusion of pumping. Well near city wells. Water levels for periods of missing recorder record, January 7 to March 7, were estimated.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 132.0 ft below land-surface datum, December 10, 1967; lowest, 156.26 ft below land-surface datum, September 5, 1983.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	147.03	147.17	144.39	145.27	145.49	149.47	148.84	151.11	155.47	151.67	150.93	148.06
2	146.70	147.64	144.17	145.13	145.80	149.89	150.03	151.60	155.00	151.16	151.28	147.86
3	147.28	147.63	143.79	145.00	145.46	150.24	149.16	152.34	153.79	151.97	149.99	147.39
4	147.73	147.60	143.86	145.61	145.58	150.07	149.15	152.42	155.36	151.97	149.52	148.11
5	147.85	147.46	143.97	145.49	145.91	149.22	151.79	152.19	156.26	151.93	149.31	147.73
6	147.68	147.26	143.93	145.60	146.27	149.71	152.62	152.32	153.54	151.68	149.21	149.34
7	147.98	147.42	143.95	146.13	146.31	149.39	152.36	150.14	154.22	151.91	149.04	147.78
8	148.25	147.72	144.18	144.47	145.91	149.85	149.58	151.64	154.35	151.56	149.51	147.55
9	147.96	147.16	145.62	143.71	146.33	148.95	149.25	152.51	154.35	150.70	149.00	147.00
10	147.92	146.26	145.70	144.40	146.15	149.03	148.84	152.54	154.37	150.97	149.50	147.74
11	148.43	146.37	146.42	145.25	146.04	149.02	150.01	151.96	153.67	150.94	149.19	146.63
12	148.44	146.62	145.59	145.58	146.54	148.89	150.88	151.98	154.40	150.68	149.27	148.32
13	148.16	145.70	145.13	145.53	147.44	150.09	151.82	152.09	152.91	150.75	149.05	147.40
14	148.42	145.65	145.25	145.24	149.39	150.37	151.75	151.61	155.00	150.72	149.40	147.65
15	148.30	146.26	145.40	144.51	148.14	151.78	150.72	152.87	154.80	150.59	147.95	147.79
16	147.65	145.84	145.32	145.39	146.24	152.64	150.05	153.48	153.54	150.34	149.25	147.86
17	147.27	145.38	143.55	145.31	146.57	151.76	150.72	153.53	153.40	150.91	150.91	147.90
18	147.39	145.32	143.44	145.12	146.56	151.52	151.43	153.60	152.76	150.81	148.04	146.84
19	147.92	145.33	144.13	145.38	147.26	151.41	151.34	153.89	152.56	150.98	149.92	148.13
20	147.82	145.05	144.48	145.57	146.69	151.96	151.46	153.95	153.09	150.69	148.61	147.92
21	147.52	144.94	145.20	145.46	146.62	151.11	151.27	151.95	152.93	150.64	149.19	147.71
22	147.59	144.78	145.70	145.51	146.37	150.05	151.50	151.62	155.21	150.36	149.80	146.11
23	147.06	144.83	145.70	144.63	147.06	150.48	150.51	153.42	153.41	150.49	148.92	146.43
24	146.77	145.05	145.14	144.68	147.08	150.41	150.73	153.18	152.34	150.14	148.25	148.13
25	147.00	145.47	145.73	145.58	147.35	148.73	152.60	152.88	151.71	150.04	148.38	151.30
26	147.05	145.83	145.43	145.54	147.55	149.84	152.71	153.33	152.05	150.17	148.33	151.95
27	147.35	145.53	144.78	145.45	147.84	150.13	152.18	153.81	151.88	150.11	147.78	153.52
28	148.08	144.67	145.20	145.47	147.92	148.64	151.69	154.01	152.16	150.14	147.98	152.29
29	147.99	---	145.64	145.65	147.88	150.13	153.08	154.87	152.04	150.09	148.25	150.91
30	147.04	---	145.78	145.79	148.60	149.11	152.83	155.90	151.89	150.02	148.19	152.87
31	146.90	---	145.66	---	148.14	---	150.96	156.11	---	150.12	---	152.83
MEAN	147.63	146.14	144.91	145.25	146.86	150.15	151.03	152.87	153.62	150.81	149.13	148.68

CAL YR 1983 MEAN 148.94 HIGH 143.44 LOW 156.26

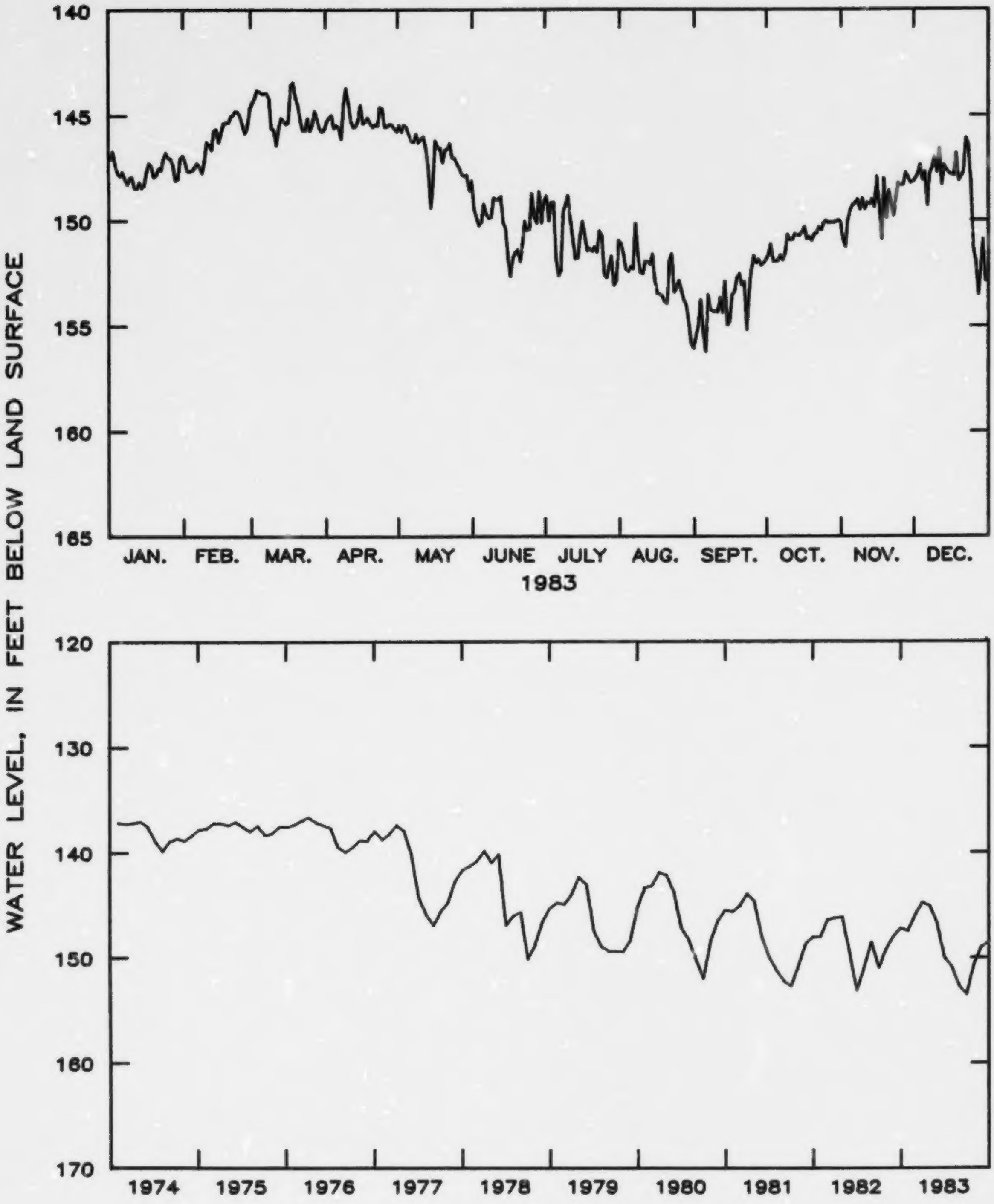


Figure 2.5–3.––Water level in observation well 07N001, Randolph County.

11L002 ALBANY NURSERY DOUGHERTY COUNTY

313530084203201 Local number, 11L002.
LOCATION.--Lat 31°35'32", long 84°20'35", Hydrologic Unit 03130008, Tallahassee Plantation, 10.4 mi west of Albany.
Owner: Georgia Department of Natural Resources, Albany Nursery.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 656 ft, cased to 542 ft, open hole.
DATUM.--Altitude of land-surface datum is 222 ft.
Measuring point: Floor of recorder shelter, 3.02 ft above land-surface datum.
REMARKS.--Well pumped April 1976; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 3, 1975. Water levels for periods of missing recorder record, August 2 to September 15 and September 21 to October 25, were estimated.
PERIOD OF RECORD.--September 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.90 ft below land-surface datum, April 29, 1975; lowest, 123.45 ft below land-surface datum, August 2, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	91.12	88.82	86.04	84.45	84.13	91.60	99.13	112.39	115.97	108.46	104.40	99.20
2	90.95	88.67	85.99	84.28	84.03	92.72	98.93	112.86	115.91	108.60	104.28	99.00
3	90.90	88.85	85.95	84.33	83.91	93.55	98.75	113.24	115.85	108.75	104.17	98.67
4	90.88	88.93	85.91	84.39	83.91	94.17	98.63	113.61	115.79	108.90	103.82	98.49
5	90.73	88.73	85.79	84.43	83.93	94.80	98.48	113.54	115.69	108.61	103.67	98.47
6	90.57	88.38	85.72	84.48	83.94	95.40	98.23	113.46	115.59	108.73	103.63	98.34
7	90.62	88.23	85.66	84.48	83.88	95.89	98.02	113.50	115.14	108.34	103.36	98.37
8	90.57	88.21	85.54	84.38	83.80	96.30	97.87	113.54	114.68	107.35	103.12	98.32
9	90.44	88.02	85.52	84.25	83.85	96.60	97.67	113.58	114.66	107.37	102.95	98.24
10	90.29	87.68	85.44	84.15	84.02	96.78	97.42	113.55	114.63	107.38	102.73	98.08
11	90.18	87.65	85.48	83.98	84.20	96.90	97.22	113.60	113.90	107.09	102.65	97.79
12	90.21	87.75	85.46	83.88	84.28	96.88	97.43	113.66	113.47	107.10	102.57	97.57
13	90.18	87.56	85.40	83.87	84.37	96.78	98.28	113.71	113.44	106.91	102.37	97.53
14	90.00	87.32	85.31	83.83	84.63	96.77	99.30	113.77	113.42	106.73	102.15	97.34
15	89.90	87.32	85.25	83.82	85.05	96.87	100.37	113.82	113.39	106.71	101.91	97.37
16	89.88	87.17	85.27	83.87	85.37	97.17	101.33	114.39	113.57	106.69	101.83	97.39
17	89.76	87.06	85.29	83.79	85.65	97.72	102.33	114.42	113.36	106.67	101.77	97.32
18	89.67	87.05	85.52	83.62	85.85	98.42	103.22	114.44	112.23	106.53	101.58	97.13
19	89.65	86.97	85.77	83.57	86.02	99.22	103.97	114.71	111.78	106.39	101.33	96.85
20	89.55	86.97	85.77	83.71	86.07	99.98	104.75	114.79	111.41	106.20	100.98	96.64
21	89.46	86.82	85.87	83.75	86.05	100.45	105.49	114.56	111.34	105.92	101.00	96.53
22	89.54	86.51	86.11	83.75	85.95	100.72	106.31	114.34	111.28	105.93	100.80	96.40
23	89.58	86.31	86.04	83.50	85.85	100.92	107.15	114.31	110.79	105.44	100.45	96.32
24	89.67	86.24	85.79	83.42	85.82	100.73	107.92	114.28	110.26	105.25	100.15	96.23
25	89.65	86.29	85.75	83.48	85.84	100.42	108.58	114.25	110.04	105.26	100.15	95.98
26	89.53	86.41	85.52	83.50	86.05	100.19	109.24	114.32	109.82	105.28	99.95	95.53
27	89.35	86.32	85.17	83.43	86.62	99.98	110.00	114.40	109.60	105.19	99.56	95.20
28	89.38	86.13	85.07	83.43	87.56	99.75	110.76	114.57	109.56	105.06	99.26	95.17
29	89.32	---	85.04	83.65	88.60	99.57	111.40	115.45	109.52	104.83	99.34	95.37
30	89.13	---	84.85	83.96	89.55	99.35	111.93	115.62	109.34	104.70	99.28	95.48
31	89.03	---	84.63	---	90.45	---	112.23	115.80	---	104.52	---	95.45
MEAN	89.99	87.44	85.55	83.91	85.46	97.55	102.98	114.08	112.85	106.67	101.84	97.15

CAL YR 1983 MEAN 97.18 HIGH 83.42 LOW 115.97

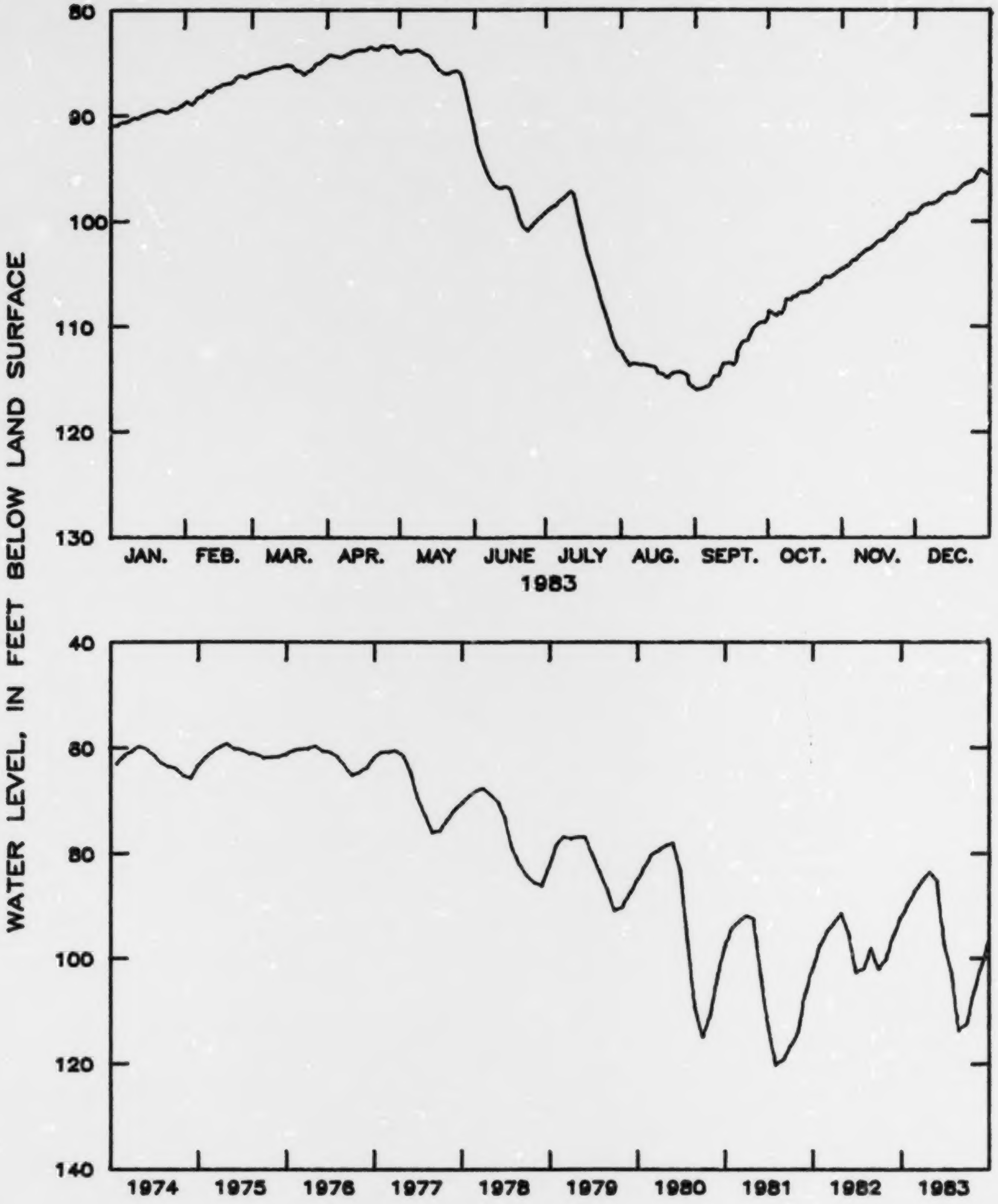


Figure 2.5-4.--Water level in observation well 11L002, Dougherty County.

13L002 TURNER CITY DOUGHERTY COUNTY

313554084062601 Local number, 13L002.

LOCATION.--Lat 31°35'54", long 84°06'25", Hydrologic Unit 03130008, Malone and Gardner Avenue near main entrance to Turner Field, Albany.

Owner: City of Albany, Turner City.

AQUIFER.--Clayton.

WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in. and 8 in., depth 760 ft, cased to 713 ft, open hole.

DATUM.--Altitude of land-surface datum is 212.84 ft.

Measuring point: Floor of recorder shelter, 3.2 ft above land-surface datum.

REMARKS.--Well pumped and sounded to a depth of 760 ft, June 21, 1978: water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted March 17, 1977. Water levels for periods of missing recorder record, January 1-2, October 10-24, and December 10-31, were estimated.

PERIOD OF RECORD.--December 1957 to December 1959, January 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.19 ft below land-surface datum, April 1, 1959; lowest, 153.04 ft below land-surface datum, August 1, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values.

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	122.69	125.57	117.28	110.74	115.18	118.75	125.79	135.71	140.10	134.37	132.56	125.91
2	121.92	125.53	117.12	110.57	116.29	119.53	125.55	134.61	139.58	134.99	133.52	125.15
3	120.97	125.78	116.49	110.52	115.49	120.10	123.78	134.18	140.69	135.28	133.81	124.72
4	120.89	126.02	116.75	110.06	114.93	121.67	125.67	133.99	140.18	135.80	131.50	125.42
5	122.75	123.20	117.91	109.57	115.68	121.08	125.72	134.37	137.56	136.31	132.85	125.32
6	124.39	120.98	117.55	109.74	116.45	121.12	125.73	134.51	138.73	136.68	132.03	123.72
7	123.74	119.54	117.83	109.93	116.97	120.96	124.49	134.52	139.57	136.64	132.49	123.13
8	123.63	118.60	117.90	110.17	116.50	121.69	124.60	134.35	140.07	136.24	131.15	122.13
9	121.47	120.45	117.41	110.57	116.50	123.04	125.97	134.83	140.26	134.62	130.70	121.69
10	122.85	122.29	117.98	110.80	118.09	122.60	126.56	135.38	139.95	133.95	129.80	121.79
11	123.35	120.65	118.29	110.40	117.99	123.00	126.51	135.74	139.45	133.97	130.77	121.58
12	125.43	119.48	118.78	110.28	117.40	123.12	126.98	135.44	139.25	133.98	130.43	121.11
13	125.65	118.23	118.79	110.75	118.56	122.52	127.43	135.23	139.48	134.34	129.38	121.29
14	124.33	118.25	118.46	114.20	117.56	123.25	128.16	134.43	139.19	134.34	129.36	121.71
15	123.46	119.58	116.45	115.57	118.54	124.15	128.81	134.62	139.19	134.27	128.67	122.22
16	125.77	118.86	115.00	116.28	116.32	124.81	129.23	134.33	138.71	134.07	127.77	122.57
17	126.05	118.04	114.41	116.85	116.63	124.79	129.79	134.59	138.24	133.80	128.98	121.93
18	126.45	118.05	115.49	117.00	116.62	125.97	130.44	135.56	137.63	133.76	128.67	120.91
19	126.66	118.19	117.03	115.83	116.77	126.23	131.26	135.97	136.37	133.45	127.92	121.02
20	125.63	117.73	115.81	116.94	117.90	126.10	131.86	136.21	136.21	133.11	126.56	122.05
21	124.62	116.64	116.76	116.58	118.12	126.14	130.85	136.39	136.67	133.59	126.67	122.23
22	126.32	117.44	115.88	115.64	118.24	124.58	132.34	136.66	136.12	133.82	126.24	122.17
23	126.68	117.64	114.88	114.83	118.29	125.13	133.51	137.15	136.24	133.38	127.02	121.45
24	127.08	118.20	112.87	113.79	118.86	126.22	134.18	137.28	136.95	132.83	127.46	121.22
25	127.51	119.15	112.43	112.38	119.18	126.90	134.40	137.64	135.21	133.38	128.70	122.31
26	127.97	119.99	112.22	115.11	118.36	126.66	134.93	137.91	135.90	131.88	128.73	123.41
27	127.90	119.51	111.47	114.53	118.64	125.04	134.51	138.84	134.07	133.01	126.68	124.16
28	127.65	117.90	110.82	114.59	119.00	125.34	135.58	139.25	134.16	132.60	127.28	124.45
29	127.18	---	110.34	115.29	118.73	124.86	135.12	138.78	134.43	131.52	127.67	124.77
30	126.77	---	110.29	115.72	118.36	125.64	135.64	139.40	135.30	131.03	126.47	125.58
31	126.09	---	110.47	---	118.59	---	135.93	139.14	---	131.18	---	125.87
MEAN	124.96	120.05	115.52	113.17	117.44	123.70	129.72	136.03	137.85	133.94	129.39	123.00

CAL YR 1983 MEAN 125.44 HIGH 109.57 LOW 140.69

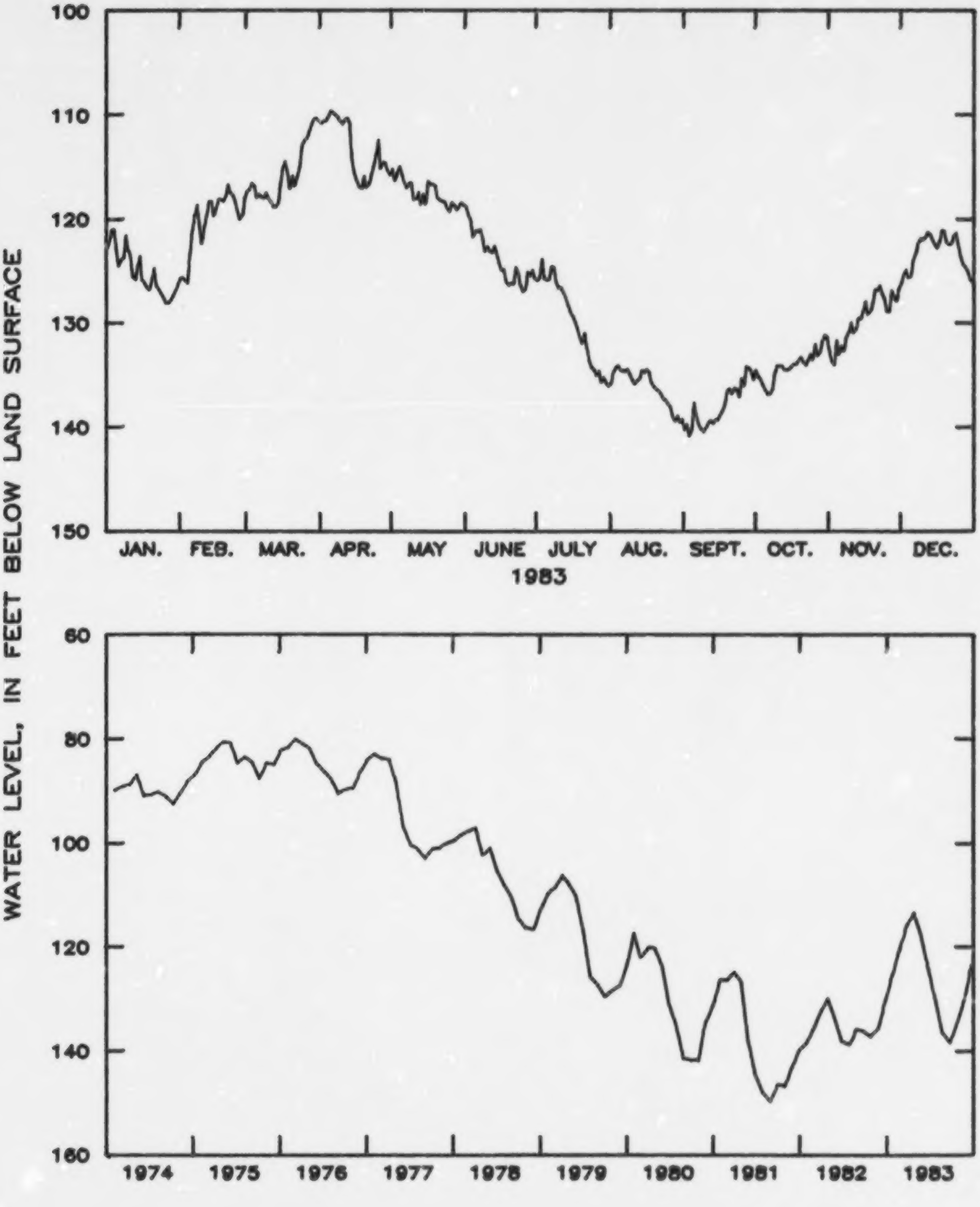
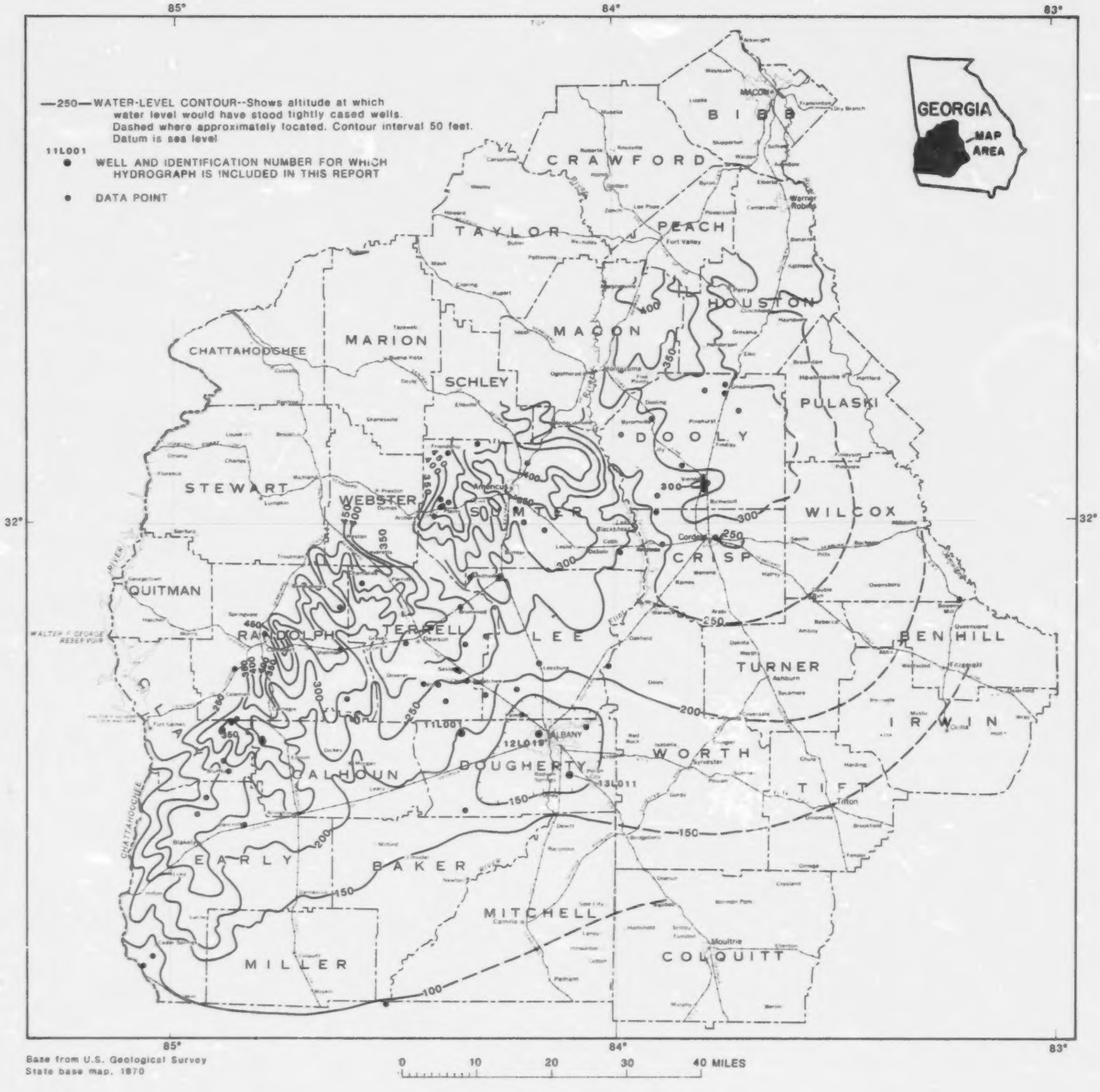


Figure 2.5-5.--Water level in observation well 13L002, Dougherty County.

2.6 Claiborne Aquifer

The Claiborne aquifer is a major aquifer in southwest Georgia and supplies more than 36 Mgal/d for municipal, agricultural, and industrial use (McFadden and Perriello, 1983). The aquifer is comprised of several hydraulically interconnected water-bearing zones of sand, limestone, and coquina.

Mean annual water levels in the Claiborne aquifer ranged from 0.8 to 6.1 feet higher in 1983 than in 1982. A new record high was reached at well 12L019 near Albany in April 1983. A reduction in pumping as a result of above-normal precipitation during the summer months allowed the water levels to rise.



—250— WATER-LEVEL CONTOUR--Shows altitude at which water level would have stood tightly cased wells. Dashed where approximately located. Contour interval 50 feet. Datum is sea level
11L001 ● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPH IS INCLUDED IN THIS REPORT
● DATA POINT
GEORGIA
MAP AREA
85°
84°
83°
32°
BIBB
CRAWFORD
PEACH
TAYLOR
HOUSTON
MACON
MARION
CHATTAHOOCHEE
SCHLEY
PULASKI
DOOLY
STEWART
WEBSTER
SUMTER
WILCOX
CRISP
QUITMAN
RANDOLPH
TERRELL
LEE
BEN HILL
TURNER
IRWIN
CALHOUN
DOUGHERTY
WORTH
TIFT
EARLY
BAKER
MITCHELL
MILLER
COLQUITT
11L001
12L019
13L011
MACON
Warner Robins
Fort Valley
Cordele
ALBANY
Ashburn
Tifton
Moultrie
WALTER F. GEORGE RESERVOIR
CHATTAHOOCHEE RIVER
FLINT RIVER
100
150
200
250
300
350
400
450
0 10 20 30 40 MILES

Base from U.S. Geological Survey State base map, 1970

Figure 2.6-1.—Observation well locations and the water level in the Claiborne aquifer, October 1983.

11L001 TEST WELL 4 DOUGHERTY COUNTY

313530084203202 Local number, 11L001.
LOCATION.--Lat 31°35'30", long 84°20'32", Hydrologic Unit 03130008, 10.4 mi west of Albany.
Owner: U.S. Geological Survey, test well 4.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 251 ft, cased to 233 ft.
DATUM.--Altitude of land-surface datum is 220 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, March 2-9, 11-15, 17-27, March 29 to April 16, and December 6-31, were estimated.
PERIOD OF RECORD.--March 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.11 ft below land-surface datum, June 5-6, 1978; lowest, 26.38 ft below land-surface datum, November 21-22, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.53	17.81	16.34	14.93	13.90	13.96	15.18	17.28	19.90	20.75	21.85	21.69
2	19.47	17.72	16.39	14.93	13.88	14.03	15.23	17.38	19.94	20.75	21.84	21.68
3	19.41	17.67	16.38	14.94	13.86	14.07	15.29	17.49	20.03	20.75	21.83	21.67
4	19.34	17.64	16.64	14.92	13.84	14.13	15.34	17.57	20.12	20.75	21.79	21.67
5	19.28	17.57	16.49	14.89	13.84	14.18	15.37	17.67	20.21	20.75	21.78	21.58
6	19.20	17.49	16.37	14.83	13.85	14.22	15.39	17.74	20.27	20.77	21.80	21.52
7	19.16	17.47	16.38	14.72	13.85	14.16	15.42	17.77	20.35	20.80	21.82	21.46
8	19.16	17.44	16.10	14.69	13.85	14.13	15.48	17.84	20.42	20.84	21.82	21.44
9	19.12	17.40	16.00	14.60	13.84	14.19	15.51	17.95	20.48	20.88	21.83	21.37
10	19.08	17.32	15.93	14.55	13.85	14.27	15.52	18.06	20.53	20.93	21.81	21.30
11	19.03	17.22	15.86	14.53	13.85	14.33	15.54	18.14	20.60	20.96	21.82	21.14
12	19.00	17.12	15.82	14.50	13.84	14.38	15.58	18.20	20.65	21.00	21.86	21.04
13	18.98	17.03	15.80	14.48	13.84	14.45	15.63	18.27	20.61	21.02	21.86	20.99
14	18.93	16.94	15.76	14.42	13.84	14.51	15.64	18.32	20.56	21.07	21.87	20.88
15	18.88	16.88	15.64	14.38	13.83	14.57	15.66	18.40	20.58	21.11	21.90	20.66
16	18.84	16.84	15.53	14.36	13.79	14.63	15.69	18.47	20.46	21.15	21.94	20.45
17	18.79	16.82	15.50	14.33	13.76	14.69	15.73	18.52	20.46	21.17	21.97	20.32
18	18.73	16.80	15.49	14.30	13.78	14.73	15.77	18.58	20.55	21.18	21.89	20.11
19	18.65	16.77	15.53	14.28	13.79	14.77	15.83	18.65	20.62	21.19	22.00	19.86
20	18.56	16.75	15.54	14.14	13.78	14.83	15.93	18.71	20.63	21.21	21.94	19.68
21	18.52	16.72	15.44	14.11	13.80	14.85	16.03	18.78	20.62	21.25	21.91	19.58
22	18.45	16.62	15.34	14.08	13.80	14.82	16.08	18.85	20.66	21.29	21.95	19.53
23	18.38	16.51	15.39	13.97	13.78	14.87	16.18	18.96	20.70	21.29	21.95	19.46
24	18.32	16.46	15.37	13.87	13.79	14.90	16.31	19.02	20.74	21.29	21.82	19.40
25	18.25	16.41	15.36	13.89	13.82	14.96	16.43	19.10	20.75	21.31	21.74	19.36
26	18.18	16.35	15.29	13.92	13.83	15.05	16.55	19.24	20.75	21.55	21.74	19.32
27	18.12	16.30	15.16	13.92	13.86	15.13	16.69	19.37	20.75	21.78	21.73	19.20
28	18.07	16.25	15.13	13.92	13.88	15.14	16.84	19.50	20.76	21.80	21.70	19.16
29	18.00	---	15.04	13.91	13.90	15.14	16.98	19.59	20.75	21.82	21.69	19.14
30	17.94	---	14.97	13.90	13.90	15.16	17.09	19.71	20.75	21.83	21.69	19.11
31	17.88	---	14.93	---	13.92	---	17.19	19.83	---	21.85	---	19.03
MEAN	18.75	17.01	15.71	14.37	13.84	14.58	15.91	18.48	20.51	21.16	21.84	20.41

CAL YR 1983 MEAN 17.72 HIGH 13.76 LOW 22.00

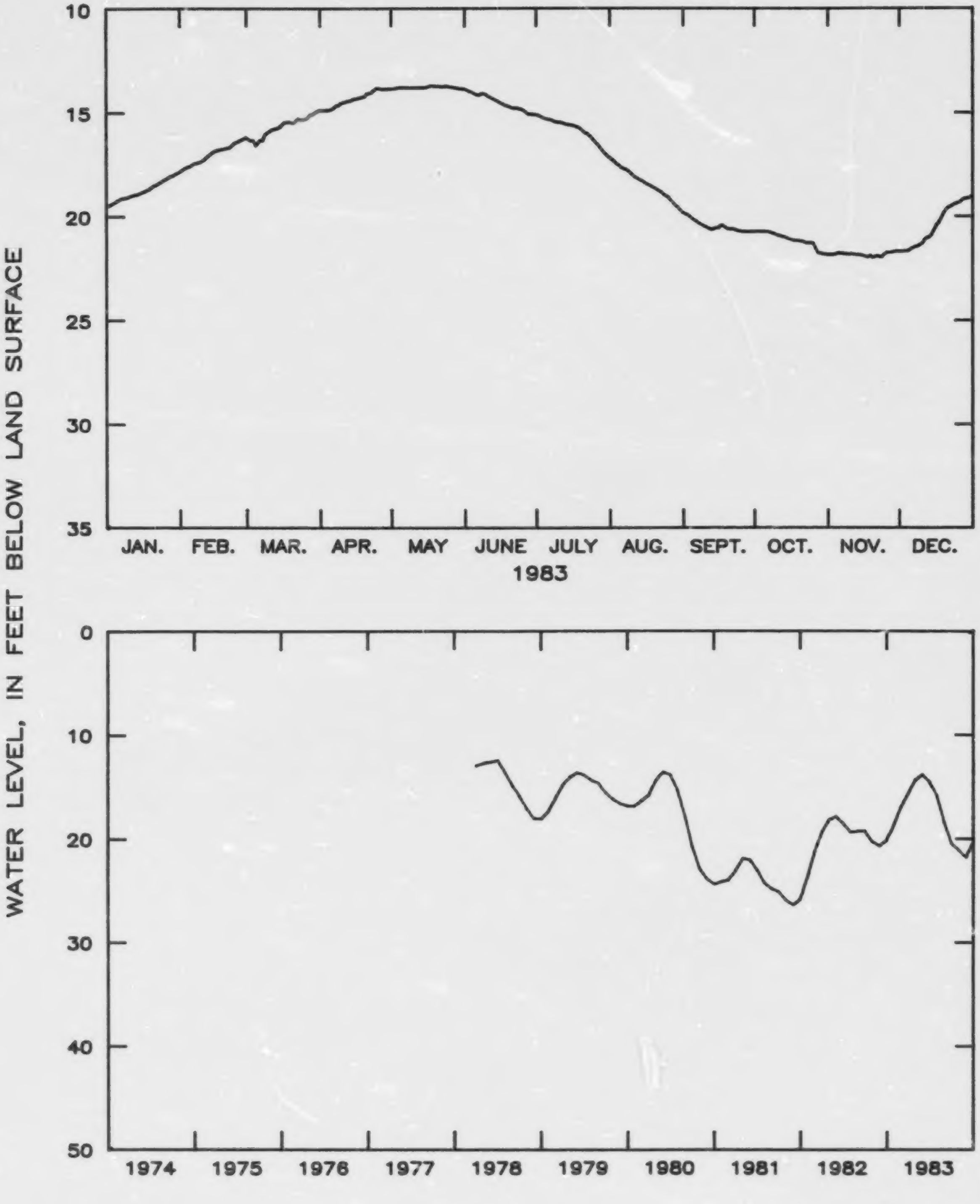


Figure 2.6—2.——Water level in observation well 11L001 Dougherty County.

313534084103001 Local number, 12L019.

LOCATION.--Lat 31°35'34", long 84°10'30", Hydrologic Unit 03130008, located in part at intersection of Slappey Drive and Fifth Avenue.

Owner: U.S. Geological Survey, test well 5.

AQUIFER.--Claiborne.

WELL CHARACTERISTICS.--Drilled unused observation well, depth 257 ft, cased and screened to 88 ft.

DATUM.--Altitude of land-surface datum is 198 ft.

Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.

REMARKS.--Water level for periods of missing recorder record, January 2, January 28 to February 1, April 21 to May 2, August 11 to September 9, and December 22-31, were estimated.

PERIOD OF RECORD.--March 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.35 ft below land-surface datum, April 20, 1983; lowest, 99.53 ft below land-surface datum, August 1-2, 1978.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	85.42	80.62	82.20	77.18	73.59	79.77	86.12	92.14	95.04	89.19	86.22	83.83
2	84.56	80.55	82.10	76.38	73.87	79.83	86.34	92.28	95.01	88.99	86.00	83.87
3	83.71	80.61	81.85	75.46	73.96	80.38	86.42	92.42	95.09	88.85	85.74	83.13
4	83.49	80.44	81.78	75.20	74.26	80.98	86.41	92.57	95.23	88.75	85.47	82.78
5	83.01	80.12	81.65	75.16	74.93	81.52	86.43	92.64	95.26	88.68	85.38	83.01
6	82.46	79.59	81.29	75.18	75.64	82.00	86.51	92.64	95.24	88.68	85.37	82.82
7	82.22	79.35	80.99	75.13	75.90	82.43	86.75	92.64	95.27	88.86	85.22	82.75
8	82.17	79.33	80.70	75.10	75.35	82.71	87.01	92.76	95.26	88.67	85.04	82.78
9	82.05	79.63	80.70	75.04	74.93	82.54	87.08	92.90	95.29	88.67	84.95	82.83
10	81.97	79.72	80.70	74.64	75.02	82.72	86.80	97.94	95.29	88.61	84.94	82.35
11	82.01	79.76	80.54	74.28	75.61	83.08	86.52	93.12	95.18	88.57	85.09	81.74
12	82.02	80.25	80.32	74.03	76.39	83.64	86.39	93.35	94.33	88.50	84.99	81.39
13	81.93	80.72	79.47	73.80	77.02	84.08	86.41	93.52	94.25	88.44	84.71	81.21
14	81.88	80.99	78.75	73.54	77.49	84.42	86.53	93.63	94.07	88.43	84.57	81.08
15	81.53	81.29	78.53	73.34	77.80	84.80	86.90	93.90	94.24	88.36	84.54	81.15
16	81.00	81.06	78.28	73.12	77.75	85.20	87.33	94.07	93.86	88.12	84.54	81.20
17	80.99	80.54	77.98	72.78	78.16	85.51	87.70	94.07	93.46	87.90	84.53	81.05
18	80.92	80.60	77.82	72.52	78.62	85.67	88.00	94.10	92.82	87.69	84.56	81.41
19	81.01	80.71	77.70	72.45	78.99	85.82	88.35	94.18	92.34	87.55	84.55	81.88
20	81.08	80.87	77.53	72.35	79.12	85.84	88.57	94.22	92.12	87.48	84.36	81.66
21	81.07	81.06	77.53	72.46	79.45	85.94	88.88	94.19	92.14	87.47	84.39	81.24
22	80.57	81.05	77.32	72.47	79.77	86.08	89.31	94.29	92.16	87.38	84.05	80.92
23	80.69	81.10	76.78	72.44	79.77	86.07	89.86	94.56	92.19	87.15	83.87	80.70
24	80.62	81.29	76.33	72.46	79.68	85.88	90.29	94.87	92.11	87.02	84.01	80.57
25	80.55	81.24	76.77	72.47	79.17	85.98	90.70	95.16	92.01	86.97	84.57	80.35
26	80.56	81.43	77.30	72.62	79.18	86.33	91.11	95.38	91.69	86.80	85.01	80.07
27	80.58	81.78	77.47	73.05	79.71	86.59	91.24	95.52	90.89	86.46	85.16	80.06
28	80.74	81.96	77.55	73.34	80.02	86.65	91.45	95.57	90.28	86.30	84.78	80.19
29	80.87	---	77.70	73.44	80.11	86.43	91.64	95.47	89.84	86.28	84.32	80.44
30	80.91	---	77.65	73.45	80.02	86.12	91.77	95.18	89.46	86.29	83.86	80.65
31	80.78	---	77.44	---	79.85	---	91.96	95.06	---	86.34	---	80.55
MEAN	81.73	80.63	79.06	73.83	77.46	84.17	88.28	93.85	93.40	87.85	84.83	81.60

CAL YR 1983 MEAN 83.91 HIGH 72.35 LOW 95.57

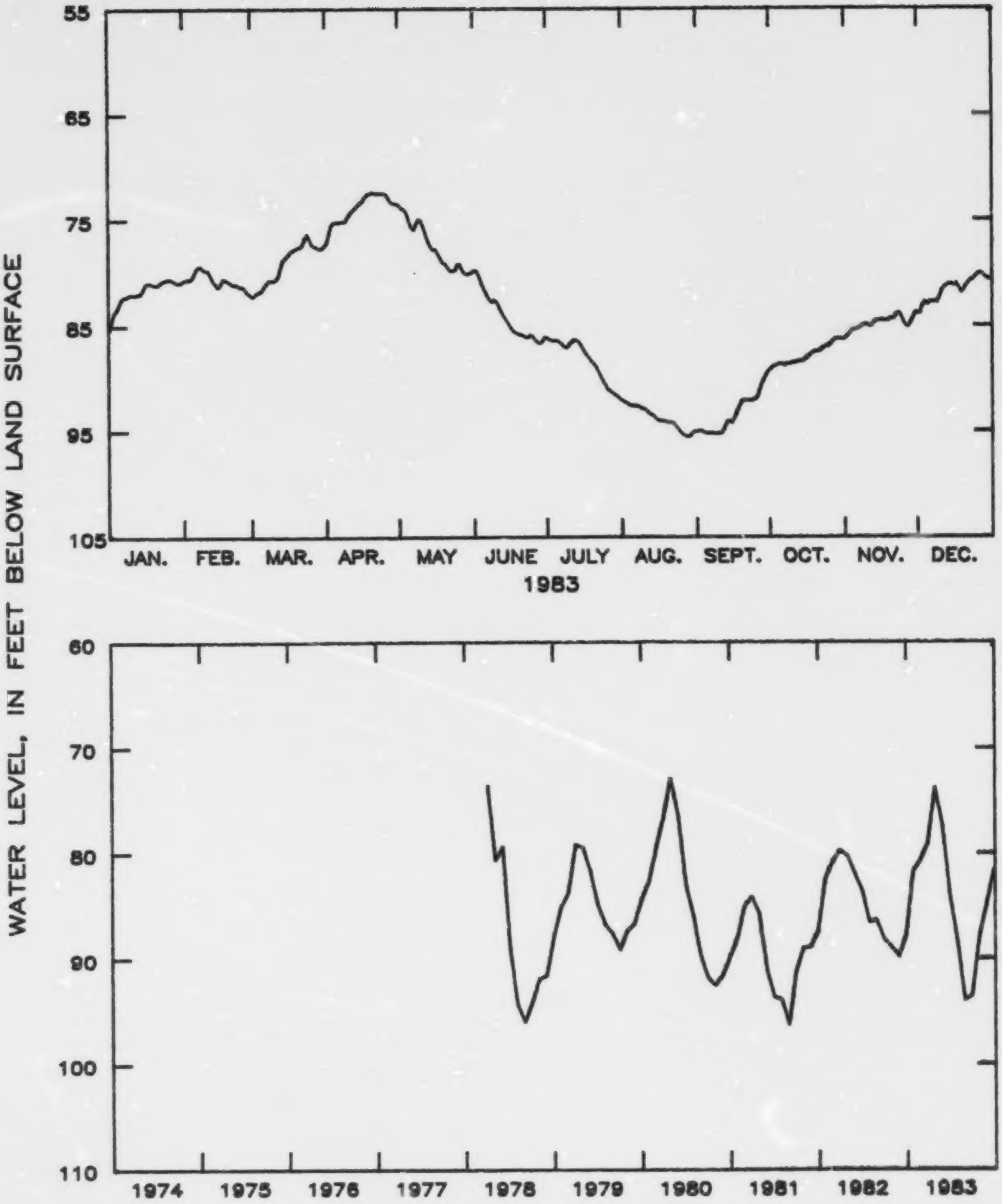


Figure 2.6-3.--Water level in observation well 12L019, Dougherty County.

13L011 TEST WELL 2 DOUGHERTY COUNTY

313105084064301 Local number, 13L011.
LOCATION.--Lat 31°31'05", long 84°06'43", Hydrologic Unit 03130008, about 6.5 mi southeast of Albany off U.S. Highway 19 on School Bus Road.
Owner: U.S. Geological Survey, test well 2.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 418 ft, cased to 398 ft.
DATUM.--Altitude of land-surface datum is 195 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.01 ft below land-surface datum, April 5, 1978; lowest, 95.00 ft below land-surface datum, August 9-11, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	75.83	74.18	73.25	69.91	69.17	69.48	72.93	76.95	79.19	77.12	77.59	74.28
2	75.92	74.02	73.34	69.76	69.34	69.57	72.96	76.79	79.19	77.18	77.58	74.23
3	76.03	74.04	73.42	69.97	69.31	69.68	72.98	76.65	79.30	77.23	77.65	74.07
4	76.05	74.08	73.52	70.17	69.30	69.76	72.92	76.58	79.47	77.25	77.71	73.96
5	76.05	74.11	73.54	70.16	69.56	69.96	72.70	76.51	79.53	77.32	77.72	73.97
6	76.14	74.07	73.12	70.13	69.69	70.19	72.52	76.47	79.54	77.38	77.72	73.99
7	76.16	74.02	72.69	70.05	69.57	70.33	72.48	76.39	79.59	77.48	77.61	74.13
8	76.19	73.75	72.27	70.12	69.38	70.49	72.56	76.30	79.61	77.70	77.68	74.09
9	76.30	73.44	72.08	70.13	69.18	70.81	72.72	76.31	79.67	78.02	77.76	73.98
10	76.34	73.21	72.02	70.24	69.10	71.01	72.90	76.47	79.70	78.10	77.73	73.90
11	76.24	73.19	71.97	70.30	69.03	71.13	73.10	76.68	79.72	78.00	77.78	73.74
12	76.24	73.22	71.83	70.36	68.81	71.23	73.19	76.94	79.71	77.94	77.78	73.51
13	76.27	73.15	71.74	70.36	68.72	71.28	73.39	77.14	79.56	77.88	77.60	73.36
14	76.36	73.01	71.78	70.21	68.77	71.33	73.58	77.27	79.47	77.88	77.27	73.24
15	76.39	73.14	71.81	70.03	68.81	71.45	73.76	77.57	79.37	77.87	76.96	73.28
16	76.32	73.09	71.53	69.92	68.72	71.74	74.03	77.77	79.05	77.79	76.85	73.30
17	76.21	72.92	71.20	69.77	68.78	72.08	74.25	77.80	78.66	77.68	76.77	73.30
18	76.10	72.92	71.00	69.55	69.01	72.35	74.33	77.86	78.26	77.68	76.64	73.20
19	75.95	72.94	70.87	69.33	69.25	72.63	74.58	77.97	77.88	77.71	76.58	72.92
20	75.76	73.00	70.64	69.21	69.49	72.77	74.99	78.03	77.52	77.77	76.30	72.75
21	75.51	73.02	70.35	69.20	69.67	72.79	75.35	78.03	77.27	77.93	76.10	72.73
22	75.45	72.99	70.18	69.10	69.73	72.78	75.69	78.16	77.16	78.01	75.96	72.58
23	75.24	73.04	70.11	68.95	69.78	72.81	76.11	78.46	77.15	77.87	75.81	72.53
24	75.02	73.00	70.18	68.86	69.91	72.89	76.56	78.80	77.20	77.67	75.55	72.58
25	74.75	73.00	70.42	68.75	70.03	73.04	76.98	79.12	77.07	77.56	75.43	72.53
26	74.64	73.14	70.45	68.78	70.15	73.07	77.30	79.36	77.02	77.55	75.25	72.42
27	74.57	73.18	70.19	69.10	70.15	73.03	77.48	79.53	77.21	77.68	74.94	72.58
28	74.64	73.23	70.09	69.27	69.95	73.01	77.44	79.61	77.39	77.99	74.58	72.89
29	74.69	---	69.93	69.25	69.79	72.98	77.27	79.54	77.39	78.05	74.40	73.31
30	74.64	---	69.89	69.15	69.68	72.94	77.16	79.28	77.20	77.95	74.28	73.69
31	74.42	---	69.94	---	69.55	---	77.10	79.19	---	77.71	---	73.76
MEAN	75.69	73.36	71.46	69.67	69.40	71.62	74.56	77.73	78.54	77.71	76.65	73.38

CAL YR 1983 MEAN 74.15 HIGH 68.72 LOW 79.72

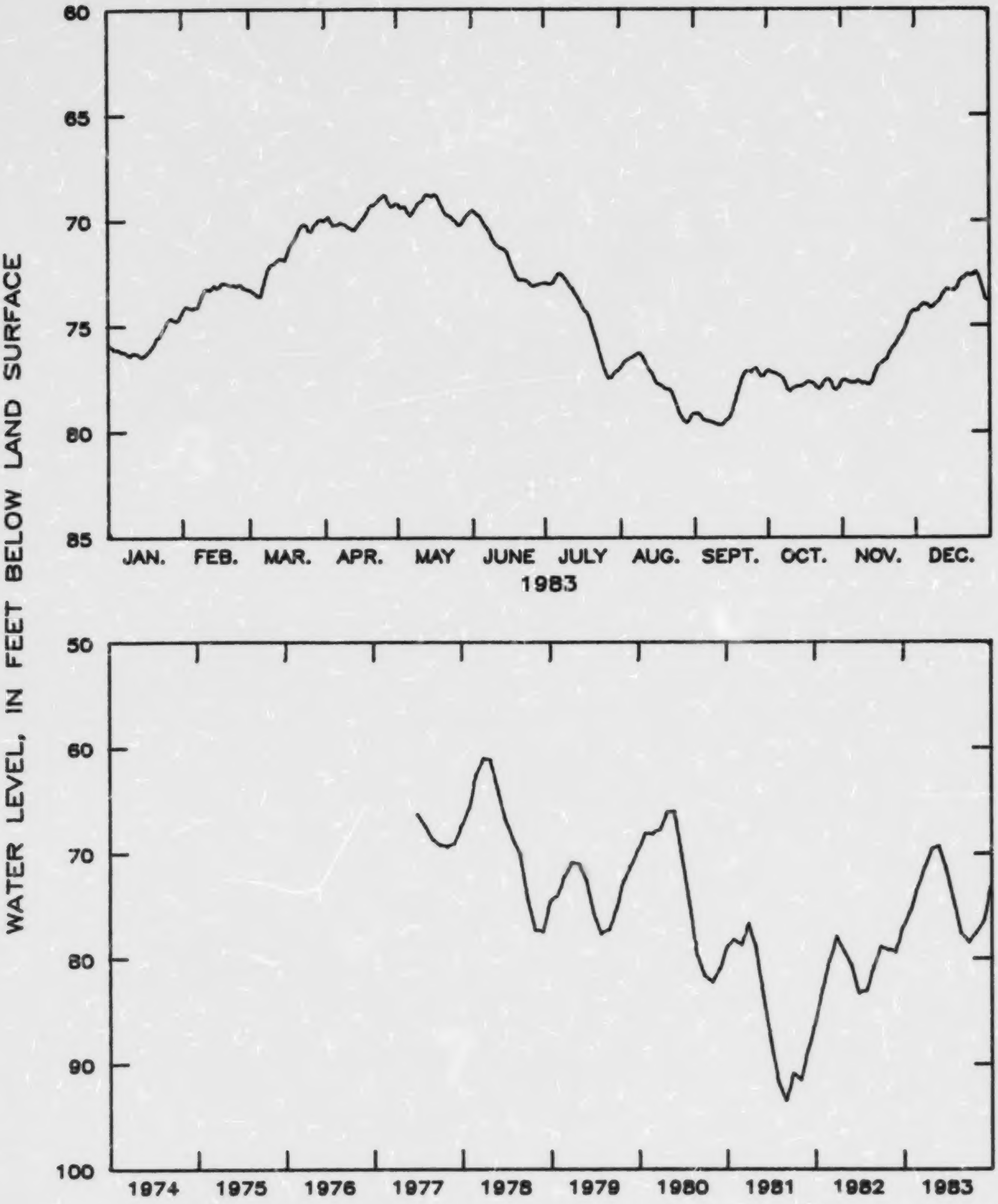


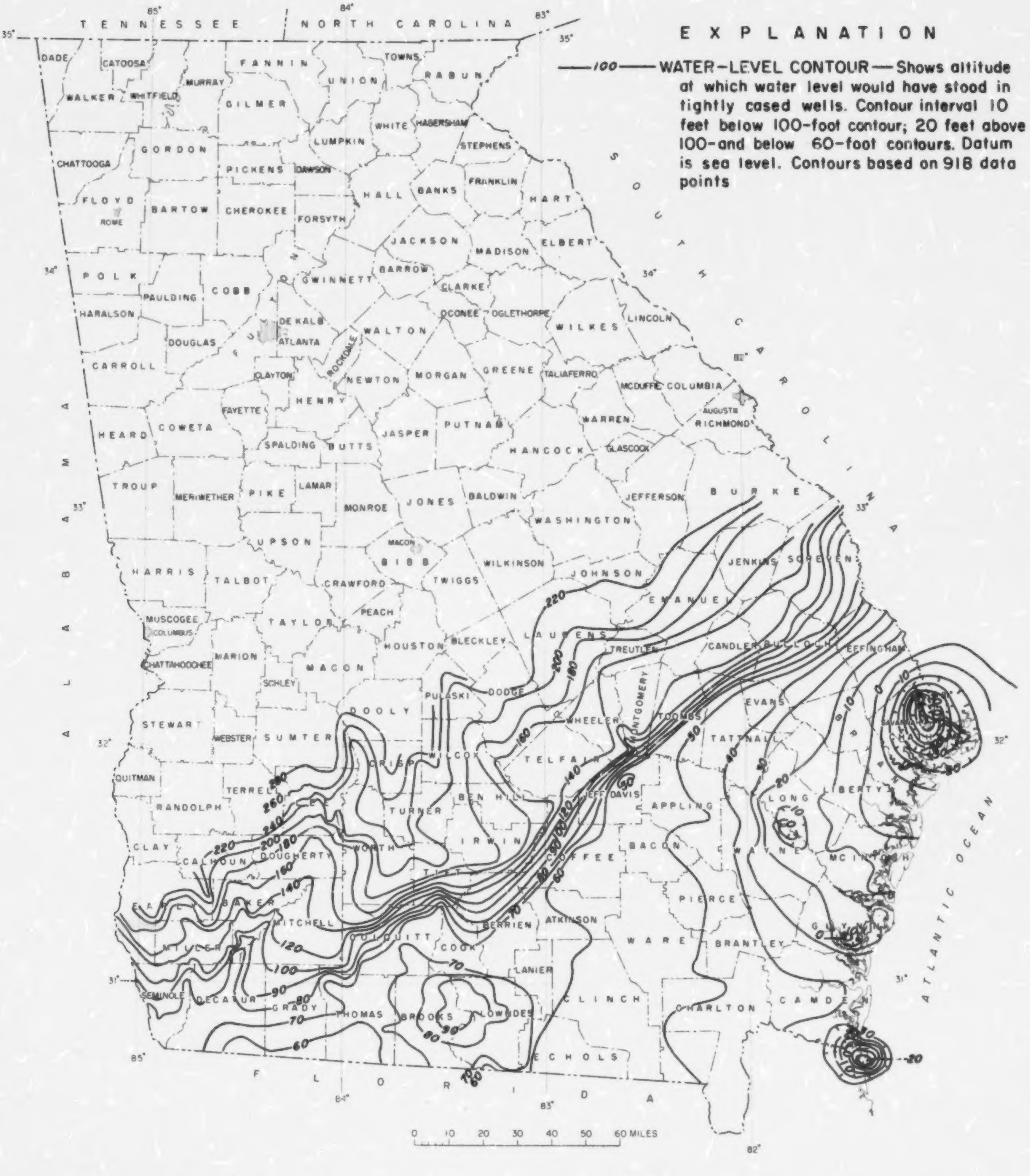
Figure 2.6-4.--Water level in observation well 13L011, Dougherty County.

2.7 Floridan Aquifer System

The Floridan aquifer system (formerly the principal artesian aquifer) is one of the most productive ground-water reservoirs in the United States. About 600 Mgal/d is pumped from the aquifer system in Georgia, mostly for industrial use and for irrigation (Pierce and Barber, 1982).

The aquifer system underlies most of the Georgia Coastal Plain and water is under artesian pressure except where the aquifer system crops out at land surface. In some areas, the artesian pressure is sufficient to produce flowing wells.

In areas of outcrop, water levels in wells tapping the Floridan aquifer system fluctuate seasonally in response to recharge from precipitation. Where the aquifer system is deeply buried, ground-water levels respond to pumping and the long-term fluctuations relating to recharge are less pronounced.



TENNESSEE
NORTH CAROLINA
SOUTH CAROLINA
ALABAMA
FLORIDA
ATLANTIC OCEAN
35°
34°
33°
32°
31°
85°
84°
83°
82°
0 10 20 30 40 50 60 MILES
ATLANTA
AUGUSTA
MACON
COLUMBUS
ROME
220
200
180
160
140
120
100
90
80
70
60
50
40
30
20
10
0
-20

EXPLANATION

—100— WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Contour interval 10 feet below 100-foot contour; 20 feet above 100-and below 60-foot contours. Datum is sea level. Contours based on 918 data points

Figure 2.7-1.—Water level in the Floridan aquifer system, November 1982.

2.7.1 Southwest area

Ground-water levels in the Floridan aquifer system in southwest Georgia respond to variations in precipitation, evapotranspiration, stream stage, and pumping. More than 90 percent of all ground water used for irrigation in this area comes from the Floridan aquifer system.

Water levels began declining in the late seventies due to below-normal precipitation and increased irrigation pumping. Above-normal precipitation and a decreased need for irrigation pumping during the 1982-83 growing season enabled the water levels to continue their recovery from the record lows of 1981. The water level at well 08G001 reached a new record high in February 1983.

Mean annual water levels in the southwest area ranged from 2.6 to 8.8 feet higher in 1983 than in 1982.

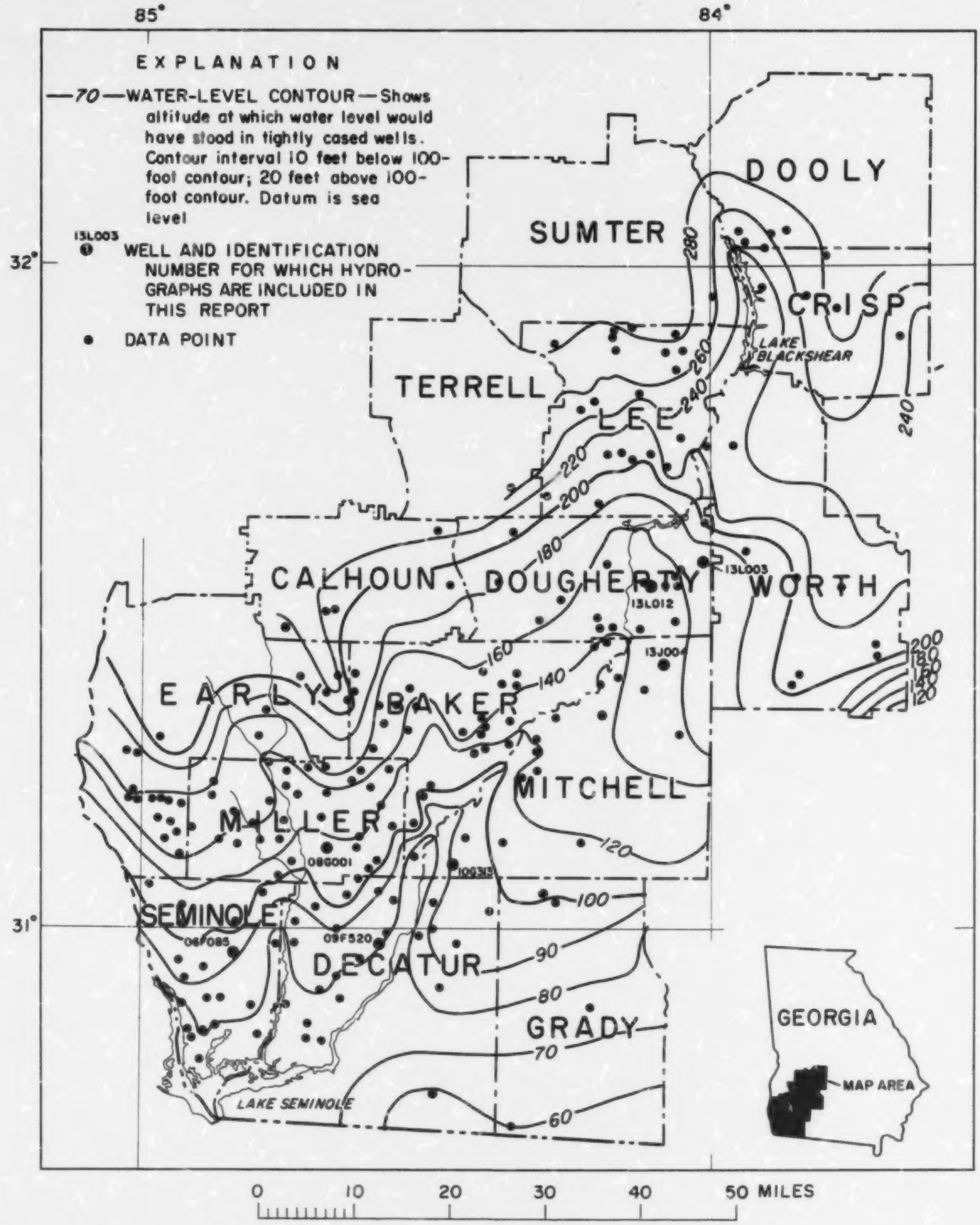

85°
84°
32°
31°
EXPLANATION
—70— WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Contour interval 10 feet below 100-foot contour; 20 feet above 100-foot contour. Datum is sea level
13L003 WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPHS ARE INCLUDED IN THIS REPORT
● DATA POINT
DOOLY
SUMTER
CRISP
LAKE BLACKSHEAR
TERRELL
LEE
CALHOUN
DOUGHERTY
WORTH
EARLY
BAKER
MITCHELL
MILLER
SEMINOLE
DECATUR
GRADY
LAKE SEMINOLE
280
260
240
240
220
200
180
160
140
120
100
90
80
70
60
200
180
160
140
120
13L003
13L012
13J004
08G001
10G313
09F520
06F085
GEORGIA
MAP AREA
0
10
20
30
40
50 MILES

Figure 2.7.1-1—Observation well locations and the water level in the Floridan aquifer system in the southwest area, November 1982.

313748084002901 Local number, 13L003.

LOCATION.--Lat 31°33'13", long 84°00'21", Hydrologic Unit 03130008, near northeast corner of Marine Corps Supply Center, Acree, Ga.

Owner: City of Albany and Dougherty County.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused supply well, diameter 6 in., depth 259 ft, cased to 206 ft, open hole.

DATUM.--Altitude of land-surface datum is 225 ft.

Measuring point: Floor of recorder shelter, 4.10 ft above land-surface datum.

REMARKS.--Well pumped and sounded June 21, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted March 17, 1977. Water level for missing recorder record, December 31, was estimated.

PERIOD OF RECORD.--January 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.41 ft below land-surface datum, April 2, 1965; lowest, 44.89 ft below land-surface datum, December 13, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	35.75	32.66	27.29	23.08	22.08	24.93	26.69	29.73	32.17	33.86	35.45	34.87
2	35.07	32.35	27.45	22.90	22.17	25.15	26.73	29.77	32.14	33.90	35.50	34.79
3	34.66	32.31	27.49	23.03	22.22	25.27	26.80	29.80	32.19	33.96	35.52	34.65
4	34.58	32.23	27.45	23.18	22.35	25.33	26.83	29.85	32.22	34.07	35.52	34.66
5	34.35	31.82	27.30	23.29	22.52	25.40	26.80	29.92	32.23	34.16	35.62	34.78
6	34.08	31.52	26.51	23.43	22.72	25.50	26.85	29.96	32.30	34.25	35.70	34.59
7	33.85	31.32	25.60	23.53	22.84	25.49	26.99	29.95	32.28	34.37	35.73	34.29
8	33.60	31.37	25.29	23.53	22.86	25.42	27.10	30.03	32.48	34.44	35.70	33.92
9	33.47	31.23	24.95	23.53	23.04	25.49	27.22	30.02	32.56	34.43	35.70	33.76
10	33.41	30.87	24.62	23.40	23.30	25.62	27.30	30.12	32.62	34.50	35.72	33.59
11	33.50	31.03	24.50	23.18	23.48	25.67	27.45	30.25	32.69	34.53	35.85	33.21
12	33.67	31.37	24.42	23.00	23.56	25.67	27.63	30.32	32.76	34.56	35.90	32.95
13	33.80	31.00	24.34	22.83	23.66	25.79	27.76	30.38	32.70	34.60	35.95	32.73
14	33.77	29.92	24.32	22.55	23.76	25.87	27.82	30.45	32.62	34.70	35.99	32.51
15	33.72	28.90	24.32	22.17	23.85	25.95	27.91	30.53	32.65	34.67	36.00	32.64
16	33.79	28.35	24.30	21.87	23.83	26.07	28.02	30.61	32.92	34.72	36.15	32.75
17	33.84	28.00	24.18	21.70	23.79	26.21	28.14	30.68	33.03	34.75	36.20	32.63
18	33.97	27.82	24.17	21.53	23.83	26.32	28.27	30.78	33.16	34.75	36.24	32.45
19	34.05	27.64	24.17	21.67	23.83	26.40	28.43	30.90	33.22	34.80	36.19	32.32
20	33.92	27.64	23.87	21.85	23.78	26.50	28.63	31.03	33.22	34.82	36.10	32.41
21	33.78	27.54	23.85	22.02	23.81	26.58	28.79	31.11	33.23	34.93	36.20	32.43
22	33.80	27.33	24.03	22.05	23.82	26.62	28.87	31.22	33.34	34.94	36.16	32.37
23	33.73	27.29	23.88	21.82	23.87	26.63	28.93	31.39	33.41	34.90	36.10	32.42
24	33.70	27.29	23.65	21.77	24.00	26.48	28.96	31.54	33.46	35.05	35.84	32.54
25	33.62	27.37	23.88	21.93	24.02	26.42	29.08	31.64	33.48	35.09	35.12	32.62
26	33.52	27.52	23.78	22.02	24.07	26.51	29.22	31.75	33.48	35.15	35.42	32.56
27	33.38	27.33	23.52	22.03	24.18	26.58	29.36	31.85	33.52	35.26	35.25	32.43
28	33.33	27.12	23.45	22.05	24.27	26.58	29.44	31.82	33.58	35.31	35.15	32.32
29	33.15	---	23.35	22.00	24.32	26.58	29.52	31.87	33.66	35.31	35.05	32.33
30	33.04	---	23.10	22.02	24.42	26.65	29.60	31.98	33.71	35.35	35.02	32.26
31	32.99	---	23.11	---	24.68	---	29.67	32.12	---	35.41	---	31.90
MEAN	33.84	29.58	24.71	22.50	23.51	25.99	28.09	30.75	32.90	34.69	35.73	33.12

CAL YR 1983 MEAN 29.62 HIGH 21.53 LOW 36.24

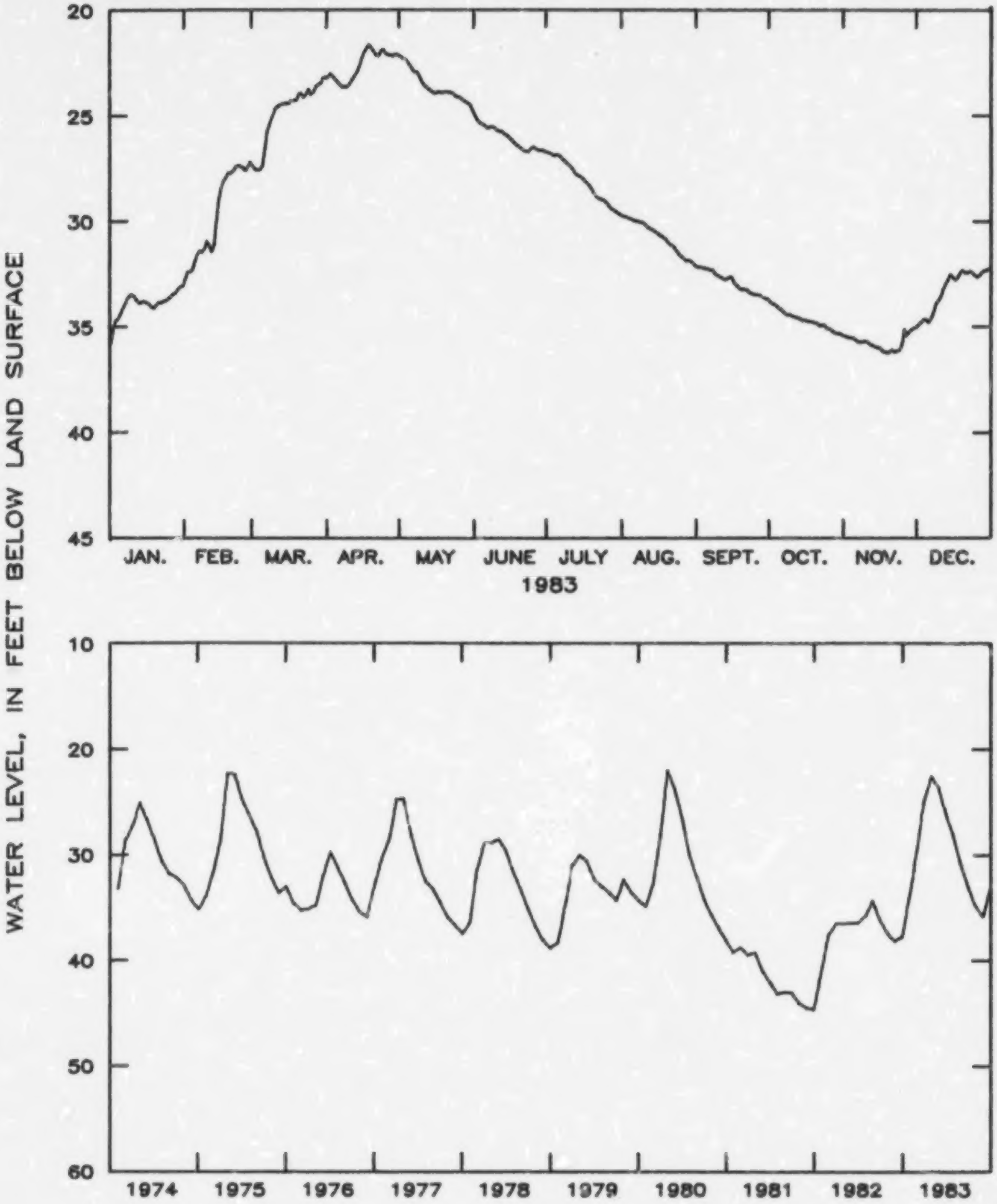


Figure 2.7.1—2.——Water level in observation well 13L003, Dougherty County.

13L012 TEST WELL 3 DOUGHERTY COUNTY

313105084064302 Local number, 13L012.

LOCATION.--Lat 31°31'05", long 84°06'43", Hydrologic Unit 03130008, about 6.5 mi southeast of Albany off U.S. Highway 19 on School Bus Road.

Owner: U.S. Geological Survey, test well 3.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused observation well, depth 218 ft, cased to 54 ft.

DATUM.--Altitude of land-surface datum is 195 ft.

Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.

REMARKS.--Water levels for period of missing recorder record, October 23-24, were estimated.

PERIOD OF RECORD.--June 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.92 ft below land-surface datum, March 2, 1979; lowest, 48.18 ft below land-surface datum, July 1, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	35.89	38.34	34.09	29.39	35.37	41.22	40.39	42.66	44.26	43.28	43.97	39.87
2	34.36	37.25	34.49	28.62	35.92	41.54	40.48	42.32	43.78	43.38	44.16	40.04
3	33.96	36.53	35.19	29.28	36.13	41.64	40.61	42.19	43.72	43.50	44.38	39.93
4	33.84	35.95	35.16	30.32	36.37	41.24	40.70	42.17	43.52	44.10	44.47	40.09
5	34.18	34.96	35.28	32.37	36.54	41.23	40.95	42.20	43.32	44.26	44.37	40.30
6	34.73	34.50	28.16	33.29	37.04	41.26	40.84	42.20	43.27	44.40	44.47	39.31
7	34.40	33.22	25.80	34.19	37.13	40.51	40.98	42.09	43.32	44.75	44.37	35.68
8	33.99	34.86	26.45	34.42	37.31	39.62	41.07	42.05	43.42	44.70	44.04	35.91
9	34.05	34.88	25.77	33.75	37.92	40.07	41.26	42.12	43.38	44.50	44.03	36.54
10	35.27	35.05	26.01	32.09	38.33	40.23	41.41	42.36	43.49	44.43	44.16	35.96
11	37.23	36.16	26.77	31.43	38.67	40.36	41.61	42.63	43.68	44.43	44.21	34.73
12	38.37	36.97	27.46	30.76	38.86	40.39	41.57	42.69	43.71	44.36	44.21	34.49
13	38.86	37.09	28.37	29.43	39.09	40.66	42.05	42.67	43.49	44.03	44.27	34.63
14	39.33	29.64	29.56	27.57	39.21	40.74	42.25	42.18	42.29	44.03	44.30	34.78
15	39.53	26.38	31.56	25.19	39.31	40.90	42.44	42.49	42.38	43.77	44.19	35.44
16	39.84	26.79	32.60	25.32	38.61	41.24	42.58	42.55	42.59	43.83	44.30	36.66
17	40.15	26.53	32.21	26.30	38.40	41.52	42.70	42.62	42.61	43.62	44.12	36.50
18	40.35	27.60	31.50	29.11	39.00	41.66	42.87	42.67	42.73	43.54	44.11	35.56
19	40.58	28.66	31.16	30.67	39.19	41.62	43.04	42.90	42.83	43.64	44.02	36.26
20	40.59	30.12	30.97	32.38	39.30	41.58	43.14	43.09	42.75	43.63	43.46	37.49
21	39.91	32.34	31.13	32.99	39.41	41.66	43.33	43.23	42.62	43.63	43.05	37.98
22	39.73	33.03	31.95	33.50	39.57	41.43	43.44	43.56	42.63	43.61	43.02	38.36
23	39.25	33.66	32.46	32.94	39.62	41.04	42.79	43.90	42.75	43.62	42.95	38.32
24	38.61	33.94	32.40	32.47	39.93	39.18	42.63	44.03	42.75	43.64	41.29	39.11
25	38.70	33.73	31.96	32.99	40.07	39.10	42.70	44.29	42.74	43.65	39.91	39.27
26	38.85	34.04	32.15	33.04	40.31	39.96	42.80	44.31	42.69	43.83	40.22	39.25
27	38.48	33.82	31.60	33.54	40.43	39.89	42.65	44.27	42.79	43.94	40.62	39.34
28	37.80	33.95	30.41	33.64	40.67	39.88	42.70	44.10	42.86	43.93	39.78	39.03
29	38.08	---	29.79	34.11	40.79	40.09	42.69	43.96	42.95	43.86	39.49	39.07
30	38.76	---	29.64	34.76	40.98	40.32	42.69	44.16	43.10	43.91	39.88	37.65
31	38.80	---	29.91	---	41.07	---	42.72	44.56	---	43.94	---	37.50
MEAN	37.62	33.21	30.70	31.36	38.73	40.73	42.07	43.01	43.08	43.93	43.13	37.57

CAL YR 1983 MEAN 38.80 HIGH 25.19 LOW 44.78

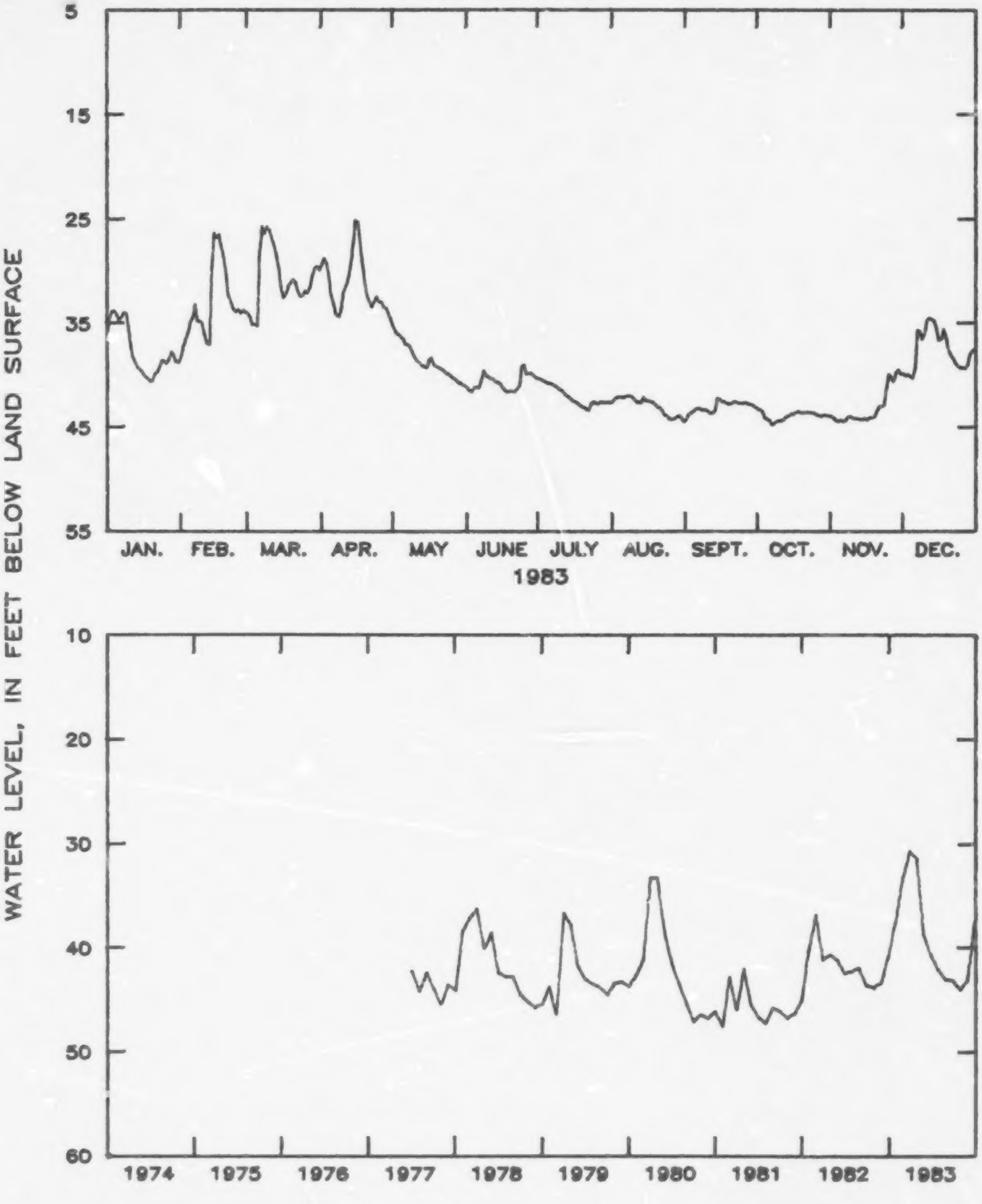


Figure 2.7.1—3.——Water level in observation well 13L012, Dougherty County.

13J004 WRIGHT MITCHELL COUNTY

312127084065801 Local number, 13J004.

LOCATION.--Lat 31°21'27", long 84°06'58", Hydrologic Unit 03130008, turn left at intersection of U.S. Highway 19 and State Highway 93, go 2.7 mi and turn right at red barn.

Owner: Henry Wright.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused observation well, diameter 12 in., depth 208 ft, cased to 77 ft, open hole.

DATUM.--Altitude of land-surface datum is 200 ft.

Measuring point: Top of front edge of shelter, 3.60 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.90 ft below land-surface datum, April 13, 1980; lowest, 54.00 ft below land-surface datum, September 25, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	49.25	46.23	41.68	39.15	38.88	42.25	43.12	45.06	46.29	47.00	47.96	47.48
2	48.70	46.02	41.78	39.07	39.05	42.88	43.14	45.05	46.27	47.07	47.93	47.25
3	48.30	45.85	41.76	39.17	39.40	43.18	43.17	45.00	46.33	47.20	47.89	47.03
4	48.00	45.65	41.73	39.32	39.50	43.28	43.20	44.98	46.43	47.05	47.76	47.03
5	47.64	45.30	41.68	39.40	39.88	42.80	43.20	45.05	46.41	47.05	47.83	47.05
6	47.52	45.03	41.26	39.52	40.06	42.80	43.45	44.97	46.47	47.14	48.00	47.03
7	47.38	45.17	40.64	39.60	40.17	42.67	43.75	44.84	46.50	47.20	48.03	47.22
8	47.25	45.23	40.22	39.58	40.20	42.67	44.12	44.88	46.51	47.24	48.05	47.00
9	47.13	45.07	40.06	39.52	40.12	42.72	43.65	44.94	46.53	47.29	48.00	46.75
10	47.07	44.82	39.96	39.37	40.50	42.79	43.65	44.98	46.61	47.30	47.90	46.50
11	47.12	45.07	39.94	39.18	40.34	42.73	44.04	44.98	46.62	47.23	48.10	46.15
12	47.24	45.34	39.90	39.15	40.34	42.69	44.30	44.94	46.70	47.21	48.20	45.96
13	47.40	45.10	39.85	39.23	40.83	42.80	44.47	45.00	46.55	47.25	48.20	45.66
14	47.32	44.40	39.85	39.00	41.02	43.40	44.40	45.10	46.60	47.45	48.20	45.48
15	47.25	43.75	39.80	38.80	40.62	43.60	44.70	45.20	46.74	47.48	48.16	45.63
16	47.28	43.04	39.65	38.57	40.58	43.68	45.00	45.27	46.78	47.50	48.31	45.82
17	47.32	42.58	39.48	38.40	40.80	44.13	45.30	45.37	46.78	47.48	48.45	45.76
18	47.45	42.42	39.52	38.17	40.95	44.06	45.15	45.50	46.77	47.46	48.45	45.57
19	47.56	42.03	39.62	38.30	40.96	44.02	45.47	45.92	46.80	47.49	48.37	45.45
20	47.35	41.76	39.42	38.45	41.28	43.72	45.87	46.29	46.70	47.50	48.16	45.45
21	47.22	41.60	39.58	38.57	41.05	43.54	45.70	45.99	46.61	47.56	48.41	45.35
22	47.22	41.34	39.83	38.55	41.03	43.46	45.65	46.08	46.71	47.51	48.47	45.16
23	47.07	41.30	39.67	38.27	41.08	43.58	45.88	46.50	46.90	47.37	48.32	45.16
24	47.00	41.30	39.47	38.18	41.28	43.30	45.52	46.63	46.90	47.52	48.20	45.42
25	46.96	41.55	39.75	38.35	41.40	43.38	45.60	46.82	46.83	47.67	48.27	45.53
26	46.90	41.84	39.64	38.47	41.50	43.38	45.90	47.40	46.79	47.68	48.10	45.40
27	46.78	41.77	39.42	38.53	42.10	43.18	45.37	46.93	46.75	47.81	47.73	45.10
28	46.93	41.53	39.46	38.55	42.48	43.17	45.25	46.49	46.77	47.95	47.50	45.02
29	46.75	---	39.47	38.65	42.32	43.10	45.24	46.21	46.88	47.90	47.65	45.22
30	46.57	---	39.40	38.74	42.17	43.10	45.13	46.22	46.93	47.90	47.68	45.33
31	46.53	---	39.23	---	42.02	---	45.10	46.22	---	47.97	---	45.10
MEAN	47.34	43.65	40.09	38.86	40.77	43.20	44.63	45.64	46.65	47.43	48.08	45.97

CAL YR 1983 MEAN 44.37 HIGH 38.17 LOW 49.25

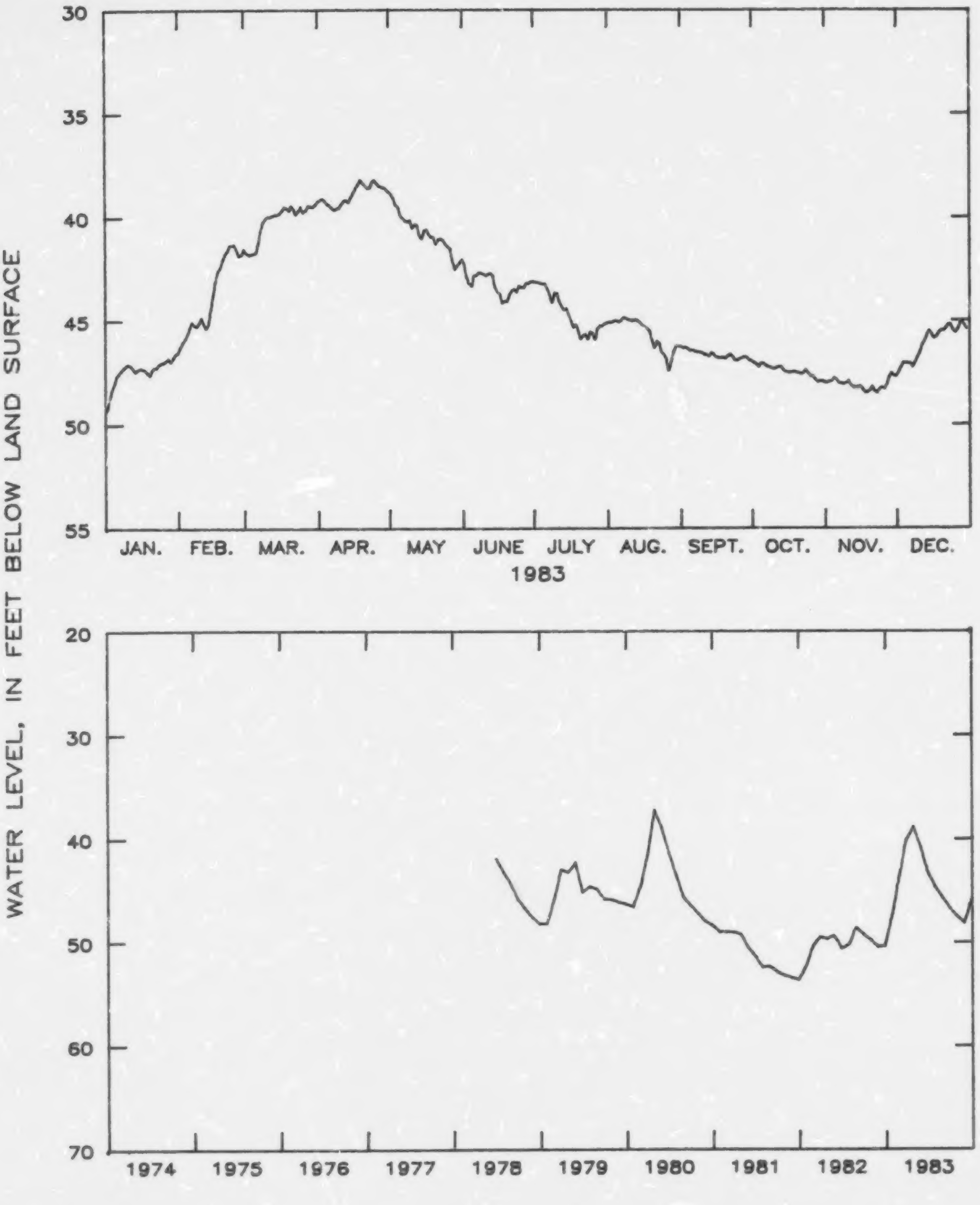


Figure 2.7.1-4.--Water level in observation well 13J004, Mitchell County.

10G313 MEINDERS MITCHELL COUNTY

310507084262201 Local number, 10G313.

LOCATION.--Lat 31°05'07", long 84°26'22", Hydrologic Unit 03130008, 1.95 mi west of Vada off of Decatur-Mitchell County line road, on right.

Owner: Harvey Meinders.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Cable-tooled unused observation well, diameter 12 in., depth 250 ft, cased to 87 ft, open hole.

DATUM.--Altitude of land-surface datum is 14.8 ft.

Measuring point: Floor of recorder shelter, 1.35 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--November 1961 to September 1968; April 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.19 ft below land-surface datum, April 12, 1964; lowest, 60.26 ft below land-surface datum, January 1, 1982.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	54.88	52.56	47.39	41.82	38.71	40.80	42.45	44.58	47.47	49.53	51.36	51.82
2	54.72	52.55	47.27	41.61	38.65	40.96	42.45	44.65	47.53	49.61	51.41	51.76
3	54.68	52.59	47.15	41.64	38.59	41.07	42.46	44.71	47.62	49.66	51.44	51.68
4	54.55	52.55	47.02	41.61	38.68	41.18	42.44	44.79	47.70	49.71	51.47	51.72
5	54.36	52.43	46.86	41.49	38.80	41.28	42.35	44.87	47.77	49.78	51.54	51.74
6	54.22	52.30	46.73	41.40	38.91	41.41	42.30	44.93	47.84	49.86	51.59	51.65
7	54.09	52.34	46.33	41.30	38.95	41.61	42.34	44.99	47.92	49.93	51.63	51.55
8	53.96	52.28	46.02	41.17	38.96	41.34	42.34	45.10	47.98	49.99	51.69	51.26
9	53.86	52.16	45.76	41.12	39.09	41.35	42.30	45.21	48.06	50.05	51.72	51.09
10	53.76	52.02	45.45	41.07	39.26	41.39	42.32	45.33	48.13	50.10	51.77	50.97
11	53.66	52.08	45.18	40.86	39.21	41.37	42.42	45.42	48.19	50.14	51.85	50.73
12	53.66	52.03	44.90	40.71	39.08	41.40	42.55	45.50	48.26	50.20	51.90	50.59
13	53.54	51.88	44.63	40.56	39.08	41.47	42.68	45.58	48.30	50.28	51.95	50.39
14	53.43	51.69	44.38	40.41	39.11	41.54	42.74	45.69	48.40	50.35	51.99	50.13
15	53.36	51.33	44.09	40.23	39.12	41.65	42.80	45.79	48.49	50.40	52.04	50.12
16	53.28	50.87	43.78	40.10	39.15	41.78	42.91	45.90	48.55	50.45	52.12	50.03
17	53.24	50.59	43.55	39.82	39.35	41.87	43.02	45.99	48.62	50.50	52.18	49.85
18	53.22	50.36	43.58	39.44	39.45	41.99	43.11	46.12	48.70	50.55	52.22	49.67
19	53.16	50.05	43.50	39.40	39.53	42.11	43.26	46.24	48.77	50.61	52.24	49.46
20	53.06	49.79	43.24	39.36	39.60	42.20	43.38	46.36	48.81	50.66	52.28	49.27
21	53.03	49.41	43.25	39.29	39.68	42.27	43.48	46.44	48.87	50.73	52.38	49.09
22	53.01	48.95	43.23	39.11	39.74	42.32	43.56	46.53	48.97	50.76	52.41	48.89
23	52.98	48.70	43.01	38.77	39.82	42.37	43.68	46.63	49.05	50.79	52.43	48.66
24	52.96	48.42	42.79	38.88	39.92	42.33	43.75	46.74	49.12	50.88	52.41	48.62
25	52.92	48.23	42.89	38.96	39.98	42.33	43.86	46.83	49.17	50.94	52.35	48.56
26	52.86	48.08	42.71	38.94	40.06	42.40	43.97	46.93	49.22	50.99	52.10	48.41
27	52.80	47.77	42.52	38.86	40.20	42.42	44.12	47.02	49.27	51.08	51.91	48.24
28	52.80	47.40	42.51	38.79	40.30	42.43	44.26	47.10	49.33	51.14	51.84	48.09
29	52.75	---	42.41	38.76	40.36	42.45	44.37	47.18	49.39	51.18	51.89	48.15
30	52.71	---	42.17	38.72	40.43	42.47	44.43	47.30	49.46	51.24	51.86	48.21
31	52.67	---	41.96	---	40.59	---	44.50	47.39	---	51.30	---	48.09
MEAN	53.49	50.76	44.40	40.14	39.43	41.78	43.12	45.93	48.50	50.43	51.93	49.95

CAL YR 1983 MEAN 46.63 HIGH 38.59 LOW 54.88

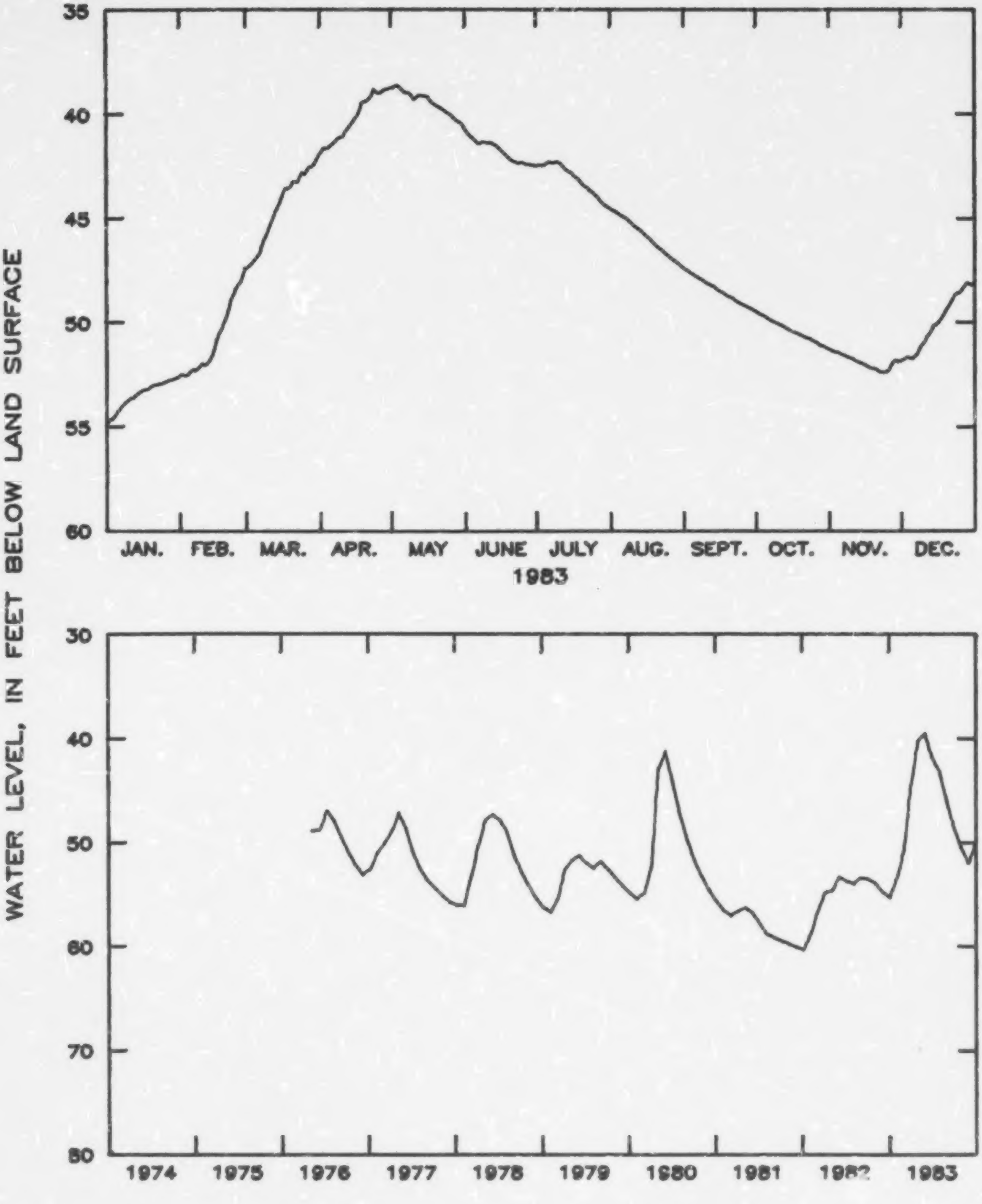


Figure 2.7.1—5.——Water level in observation well 10G313, Mitchell County.

09F520 BOLTON DECATUR COUNTY

305736084355801 Local number, 09F520.
LOCATION.--Lat 30°57'40", long 84°35'46", Hydrologic Unit 03130008, U.S. Highway 27 north of Bainbridge, right on dirt road near John Deere tractor dealership.
Owner: Graham Bolton.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Unused private irrigation well, diameter 12 in., depth 251 ft, cased to 130 ft, open hole.
DATUM.--Altitude of land-surface datum is 128 ft.
Measuring point: Floor of recorder shelter, 3.50 ft above land-surface datum.
REMARKS.--This well is about 15 ft from pumped well. Water levels for periods of missing recorder record, May 19-31 and June 9 to September 27, were estimated.
PERIOD OF RECORD.--June 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.75 ft below land-surface datum, April 24, 1975; lowest, 54.78 ft below land-surface datum, August 20, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	46.48	44.79	42.04	40.19	38.73	40.71	41.57	42.97	45.06	46.32	47.11	47.16
2	46.32	44.80	42.00	40.11	38.69	40.82	41.56	43.01	45.12	46.34	47.14	47.08
3	46.21	44.83	41.97	40.12	38.66	40.90	41.51	43.06	45.17	46.36	47.71	47.01
4	46.03	44.82	41.91	40.10	38.71	40.96	41.39	43.12	45.22	46.40	47.18	46.98
5	45.84	44.73	41.86	40.06	38.77	41.00	41.32	43.15	45.26	46.43	47.21	46.93
6	45.71	44.63	41.83	40.04	38.84	41.05	41.33	43.18	45.32	46.47	47.23	46.88
7	45.59	44.62	41.70	40.01	38.88	41.08	41.31	43.27	45.35	46.50	47.26	46.72
8	45.48	44.54	41.58	39.98	38.90	41.08	41.24	43.35	45.41	46.52	47.29	46.50
9	45.39	44.44	41.47	39.99	38.97	41.06	41.24	43.45	45.45	46.54	47.30	46.31
10	45.30	44.34	41.32	40.00	41.30	41.08	41.31	43.51	45.48	46.56	47.33	46.14
11	45.23	44.36	41.15	39.94	40.92	41.03	41.41	43.57	45.53	46.59	47.37	45.94
12	45.24	44.36	41.04	39.88	41.70	41.04	41.52	43.62	45.54	46.62	47.40	45.79
13	45.21	44.25	40.92	39.83	40.98	41.08	41.55	43.70	45.62	46.65	47.42	45.57
14	45.17	44.12	40.82	39.76	39.39	41.13	41.59	43.78	45.68	46.69	47.45	45.39
15	45.16	43.86	40.71	39.64	39.45	41.21	41.67	43.86	45.71	46.70	47.48	45.30
16	45.15	43.53	40.62	39.48	39.47	41.31	41.76	43.93	45.76	46.72	47.54	45.18
17	45.15	43.36	40.56	39.25	39.54	41.38	41.82	44.03	45.81	46.74	47.57	45.05
18	45.18	43.13	40.63	39.01	39.59	41.47	41.94	44.13	45.86	46.76	47.60	44.93
19	45.18	42.91	40.65	38.95	39.65	41.57	42.04	44.22	45.87	46.78	47.61	44.83
20	45.13	42.75	40.55	38.90	39.71	41.63	42.11	44.27	45.91	46.80	47.64	44.75
21	45.14	42.55	40.61	38.86	39.77	41.68	42.17	44.34	45.98	46.83	47.69	44.67
22	45.16	42.37	40.63	38.78	39.81	41.73	42.26	44.41	46.03	46.84	47.71	44.59
23	45.16	42.31	40.54	38.63	39.88	41.72	42.31	44.50	46.08	46.84	47.71	44.55
24	45.17	42.23	40.49	38.70	39.96	41.66	42.39	44.56	46.10	46.88	47.71	44.57
25	45.14	42.22	40.57	38.73	40.01	41.63	42.47	44.64	46.13	46.91	47.65	44.55
26	45.06	42.20	40.52	38.72	40.07	41.68	42.60	44.70	46.15	46.93	47.50	44.50
27	44.95	42.09	40.44	38.69	40.19	41.67	42.71	44.75	46.19	46.97	47.36	44.43
28	44.96	41.97	40.60	38.67	40.28	41.65	42.80	44.81	46.22	47.01	47.32	44.39
29	44.90	---	40.43	38.69	40.32	41.65	42.83	44.90	46.26	47.03	47.29	44.46
30	44.88	---	40.35	38.71	40.37	41.64	42.88	44.97	46.28	47.05	47.22	44.50
31	44.86	---	40.26	---	40.52	---	42.93	45.02	---	47.08	---	44.44
MEAN	45.34	43.61	40.99	39.41	39.74	41.31	41.92	43.96	45.72	46.71	47.43	45.49

CAL YR 1983 MEAN 43.47 HIGH 38.63 LOW 47.71

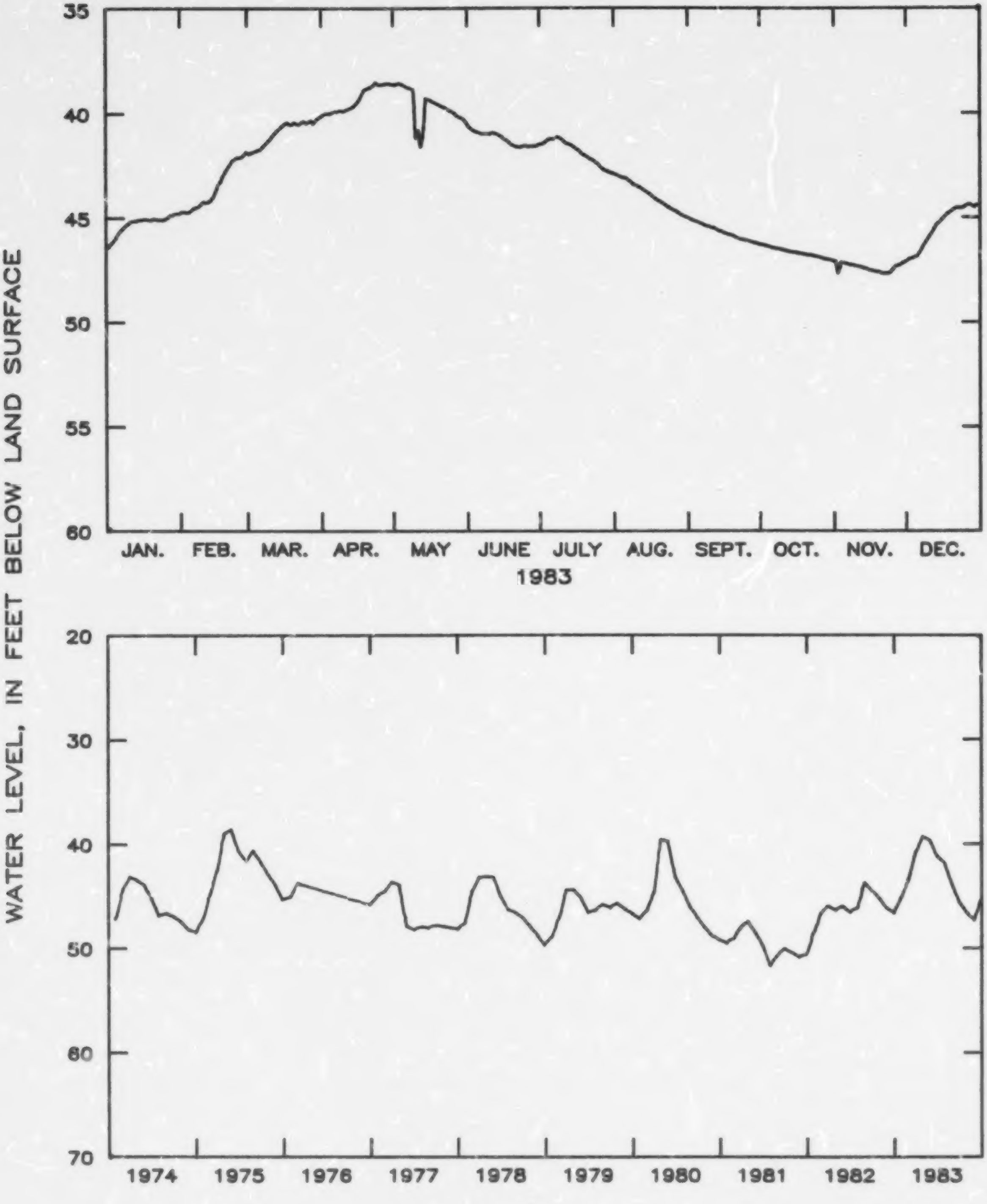


Figure 2.7.1—6.——Water level in observation well 09F520, Decatur County.

08G001 FLEET MILLER COUNTY

310651084404501 Local number, 08G001.
LOCATION.--Lat 31°06'51", long 84°40'45", Hydrologic Unit 03130010, 1 mi northeast of Boykin, Ga.
Owner: Jack Fleet.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused irrigation well, diameter 12 in., depth 255 ft, cased to 130 ft, open hole.
DATUM.--Altitude of land-surface datum is 150 ft.
Measuring point: Top front edge of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--February 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.62 ft below land-surface datum, February 16, 1983; lowest, 43.88 ft below land-surface datum, July 17, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.04	19.33	15.22	16.57	14.82	20.07	21.32	28.90	34.32	32.90	34.97	22.42
2	18.32	18.85	15.38	16.48	14.96	20.18	21.17	28.38	33.10	33.02	35.03	22.40
3	17.18	18.25	15.53	16.43	15.08	20.88	21.04	28.23	32.82	33.20	35.10	22.44
4	16.47	17.58	15.64	16.49	15.22	21.48	20.94	28.15	32.80	33.34	35.06	22.72
5	16.14	17.03	15.76	16.55	15.38	20.97	20.88	28.10	32.62	33.45	35.18	23.10
6	16.10	16.70	15.54	16.63	15.78	20.94	20.95	28.10	32.60	33.54	35.27	23.28
7	16.18	16.67	15.16	16.68	16.04	20.96	21.76	28.12	32.68	34.47	35.30	22.73
8	16.34	16.70	14.95	16.70	15.92	20.86	23.20	28.25	32.75	34.48	35.38	21.73
9	16.55	16.73	14.85	16.75	16.02	20.66	23.85	28.48	32.87	34.01	35.45	20.96
10	16.82	16.78	14.77	16.60	16.34	20.48	23.08	29.50	33.23	33.92	35.50	20.50
11	17.08	17.00	14.80	16.33	16.43	20.32	22.85	30.75	33.35	33.89	35.62	20.20
12	17.40	17.20	14.85	16.06	16.47	20.17	23.20	30.85	33.38	33.93	35.70	19.19
13	17.72	17.25	14.94	15.86	16.62	20.73	23.47	30.95	33.16	34.05	35.73	19.26
14	17.95	15.96	15.07	15.72	16.74	21.14	24.90	30.40	32.85	34.10	35.82	18.60
15	18.24	14.24	15.16	15.65	16.88	20.74	25.95	31.45	32.46	34.02	35.86	18.32
16	18.55	13.62	15.24	15.02	16.98	21.23	24.83	32.92	32.10	34.01	35.96	18.27
17	18.86	13.68	15.34	14.65	17.18	21.67	24.36	32.33	31.85	34.00	36.06	18.28
18	19.22	13.65	15.53	14.43	17.35	22.40	24.40	32.48	31.78	33.99	36.10	18.34
19	19.55	13.74	15.70	14.45	17.50	22.15	25.20	32.76	31.75	34.00	36.12	18.50
20	19.80	13.87	15.75	14.50	17.63	22.17	26.22	34.35	31.75	34.05	36.13	18.70
21	20.06	13.96	15.92	14.60	17.78	22.12	26.90	34.17	31.78	34.10	36.22	18.85
22	20.34	14.04	16.08	14.68	17.95	21.96	27.64	32.56	31.95	34.10	36.22	19.00
23	20.57	14.20	16.24	14.63	18.08	21.77	27.55	31.92	32.05	34.09	36.16	19.17
24	20.82	14.38	16.15	14.68	18.56	21.64	27.34	31.90	32.10	34.20	34.43	19.40
25	21.00	14.64	16.40	14.60	18.53	21.53	27.58	31.75	32.15	34.27	29.13	19.64
26	21.12	14.85	16.46	14.46	18.65	21.50	29.08	31.96	32.17	34.32	24.28	19.76
27	21.16	14.95	16.48	14.38	19.33	21.48	28.50	33.06	32.20	34.54	22.75	19.83
28	21.13	15.02	16.55	14.51	19.65	21.48	28.37	33.10	32.35	34.70	22.57	19.95
29	20.66	---	16.55	14.60	20.37	21.48	28.37	33.04	32.55	34.75	22.73	20.25
30	20.20	---	16.44	14.70	20.37	21.50	29.70	33.97	32.75	34.82	22.57	20.55
31	19.78	---	16.60	---	19.95	---	29.70	34.04	---	34.87	---	20.68
MEAN	18.75	15.75	15.65	15.47	17.24	21.22	24.98	31.13	32.54	34.04	33.28	20.23

CAL YR 1983 MEAN 23.39 HIGH 13.62 LOW 36.22

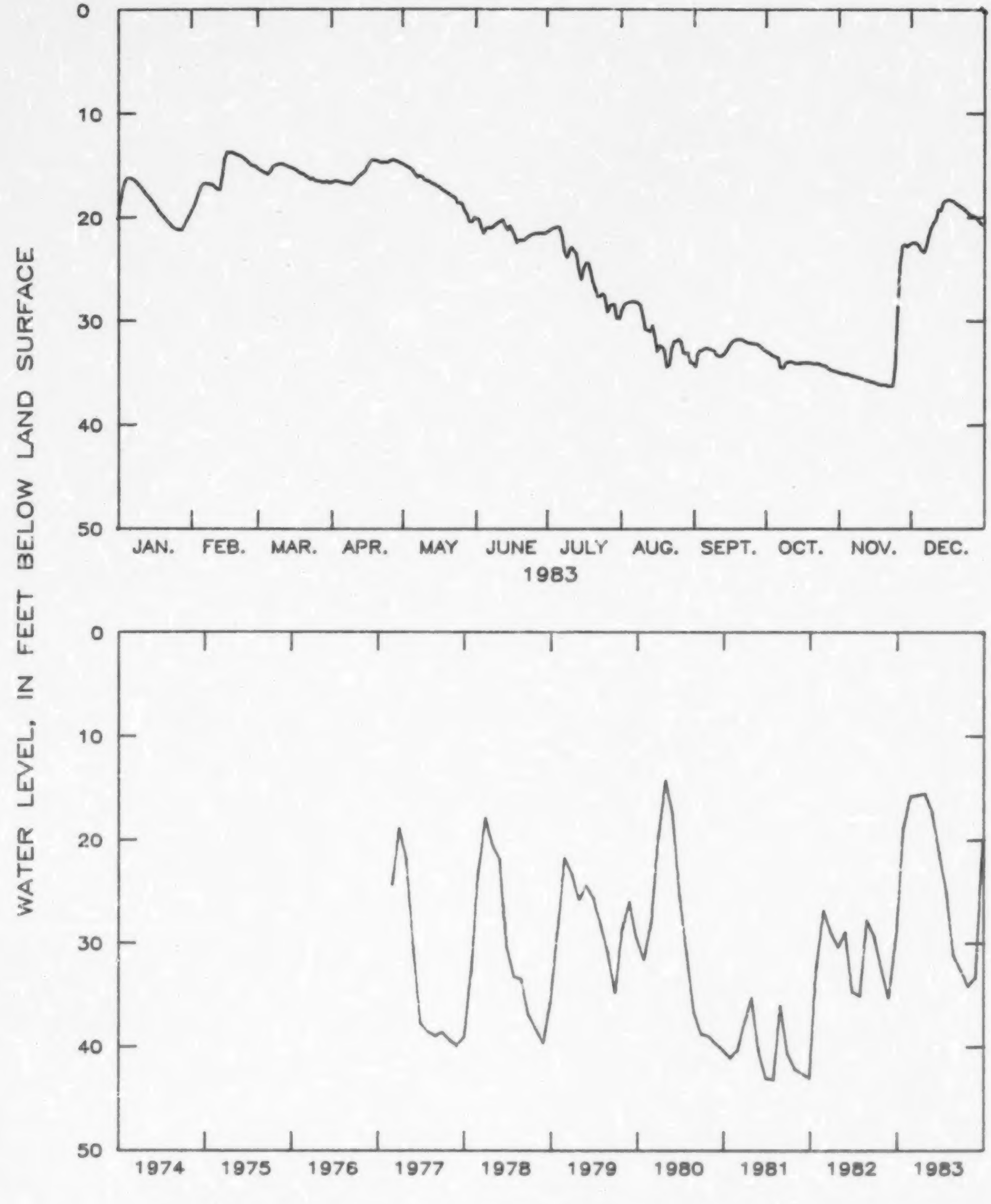


Figure 2.7.1-7.--Water level in observation well 08G001, Miller County.

305648084555901 Local number, 06F085.

LOCATION.—Lat 30°56'48", long 84°55'59", Hydrologic Unit 03130004, go 4.2 mi south from Donalsonville on State Highway 39, turn right on State Highway 235 to 2nd road on left. Recorder is about 450 ft from center pivot at old pond site.

Owner: J. P. Spooner, Jr.

AQUIFER.—Floridan aquifer system.

WELL CHARACTERISTICS.—Drilled unused observation well, diameter 6 in., depth 225 ft, cased to 118 ft, open hole.

DATUM.—Altitude of land-surface datum is 135 ft.

Measuring point: Top of front edge of shelter, 3.50 ft above land-surface datum.

REMARKS.—Water levels for period of missing recorder record, January 1-4, were estimated.

PERIOD OF RECORD.—February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.—Highest water level, 14.27 ft below land-surface datum, April 13, 1980; lowest, 48.82 ft below land-surface datum, October 10, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	30.48	23.72	19.56	18.94	17.16	25.88	29.97	36.28	39.80	40.47	41.67	39.68
2	29.39	22.98	20.20	18.87	17.32	26.13	29.82	36.33	39.85	40.63	41.63	39.34
3	28.67	22.55	19.45	18.98	17.48	26.34	29.75	36.37	39.90	41.48	41.57	38.97
4	28.24	22.42	19.42	19.25	17.80	26.43	29.72	36.42	39.97	42.04	41.46	38.72
5	28.04	22.03	19.30	19.52	18.18	26.18	29.65	36.47	39.96	41.17	41.48	38.60
6	27.42	21.57	19.08	19.75	18.56	26.25	29.67	36.45	40.01	40.96	41.58	38.00
7	26.87	21.45	18.83	19.80	18.82	26.25	29.77	36.42	40.04	40.44	41.58	37.68
8	26.40	21.45	18.74	19.55	19.01	26.16	30.02	36.47	40.07	40.95	41.61	36.85
9	26.07	21.21	18.84	19.14	19.38	26.23	30.14	36.58	40.03	40.96	41.62	36.20
10	25.85	20.86	18.91	18.67	19.93	26.37	30.28	36.78	40.05	40.95	41.57	35.72
11	25.69	21.03	19.06	18.29	20.39	26.56	30.65	37.02	40.02	40.90	41.73	35.18
12	25.73	21.32	19.19	18.00	21.96	26.65	31.93	37.13	39.95	40.88	41.87	34.68
13	25.35	21.02	19.28	17.80	21.82	26.82	32.69	37.27	39.88	40.97	41.87	34.00
14	25.69	20.11	19.42	17.45	23.08	27.10	32.67	37.47	39.94	41.12	41.87	33.57
15	25.62	19.27	19.40	17.02	23.89	27.38	33.21	38.16	40.13	41.12	41.87	33.42
16	25.68	18.63	19.33	16.77	22.57	27.67	33.35	37.98	40.15	41.13	42.01	33.15
17	25.78	18.27	19.22	16.43	22.40	27.95	32.70	39.05	40.19	41.11	42.15	32.73
18	26.03	18.11	19.45	16.05	22.50	29.56	32.96	39.60	40.29	41.08	42.18	32.28
19	26.15	17.92	19.68	16.07	22.62	30.22	33.29	39.72	40.28	41.08	42.13	31.92
20	25.99	17.97	19.52	16.23	22.75	29.31	33.55	40.48	40.20	41.11	41.95	31.73
21	25.92	17.92	19.73	16.40	22.88	29.31	34.38	40.61	40.12	41.14	42.10	31.52
22	26.03	17.67	19.84	16.46	22.98	29.43	34.53	39.54	40.26	41.11	42.22	31.27
23	26.14	17.64	20.20	16.04	23.15	29.60	34.13	39.92	40.34	41.02	42.11	31.16
24	26.28	17.73	20.27	15.81	23.38	29.72	35.35	40.22	40.38	41.13	41.82	31.27
25	26.38	18.00	20.00	15.97	23.62	29.78	36.00	41.36	40.37	41.23	41.47	31.45
26	26.33	18.37	19.88	16.12	23.97	29.93	35.10	41.10	40.32	41.28	41.18	31.35
27	25.95	18.42	19.73	16.24	24.42	30.06	35.31	40.08	40.22	41.40	40.83	31.09
28	25.40	18.17	19.70	16.55	24.77	30.02	35.60	39.71	40.22	41.65	40.50	30.76
29	24.86	---	19.65	16.78	25.02	30.01	35.88	39.69	40.26	41.67	40.42	30.82
30	24.50	---	19.43	16.97	25.38	30.03	36.08	39.60	40.33	41.63	40.00	31.17
31	24.24	---	19.12	---	25.60	---	36.18	39.69	---	41.70	---	31.33
MEAN	26.38	19.92	19.47	17.53	21.70	27.98	32.72	38.39	40.12	41.14	41.60	34.05

CAL YR 1983 MEAN 30.15 HIGH 15.81 LOW 42.22

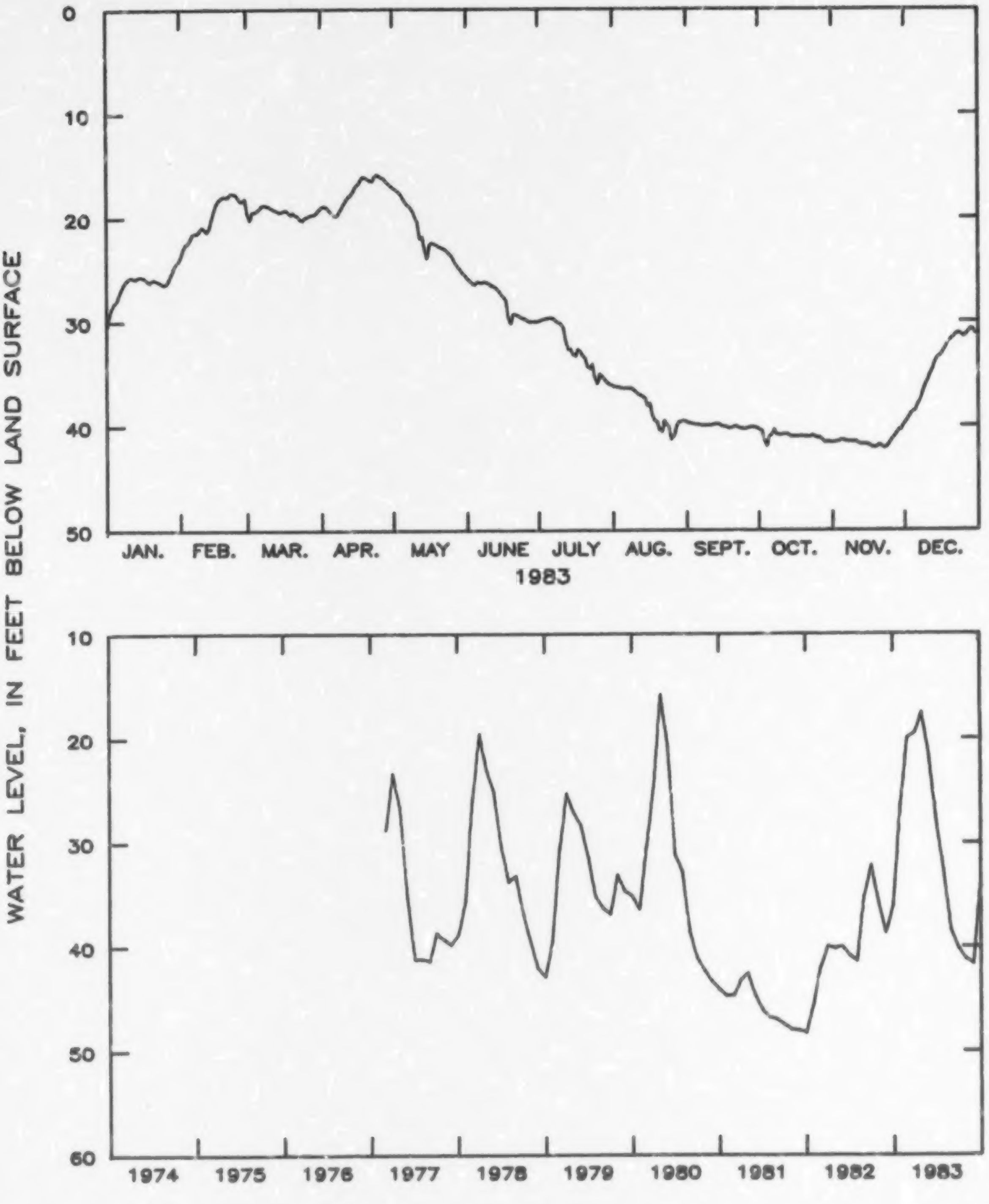


Figure 2.7.1-8.--Water level in observation well 06F085, Seminole County.

2.7.2 South-central area

Ground-water levels in the Floridan aquifer system in south-central Georgia are affected by precipitation, recharge, and pumping. Water levels in Worth, Tift, and Cook Counties began to decline in 1977 due to increased irrigation pumping. The decline accelerated during the 1980-81 drought. Irrigation pumping decreased in 1982 and water levels began to recover. Mean annual water levels changed little from 1982 to 1983.

Ground-water levels in the Valdosta area are contolled mainly by local recharge. The highest water levels are north of the city, where the Floridan aquifer system receives recharge from the Withlacoochee River. The river flows into sinkholes and cave openings in the aquifer system and water levels respond to this recharge. Increased precipitation and streamflow in winter and early spring cause high ground-water levels. Decreased precipitation and increased evapotranspiration in summer and autumn result in low streamflow and correspondingly low ground-water levels.

Mean annual water levels in the south-central area ranged from 0.9 foot higher to 2.3 feet lower than in 1982. A new record high was reached at well 19F039 in April 1983.

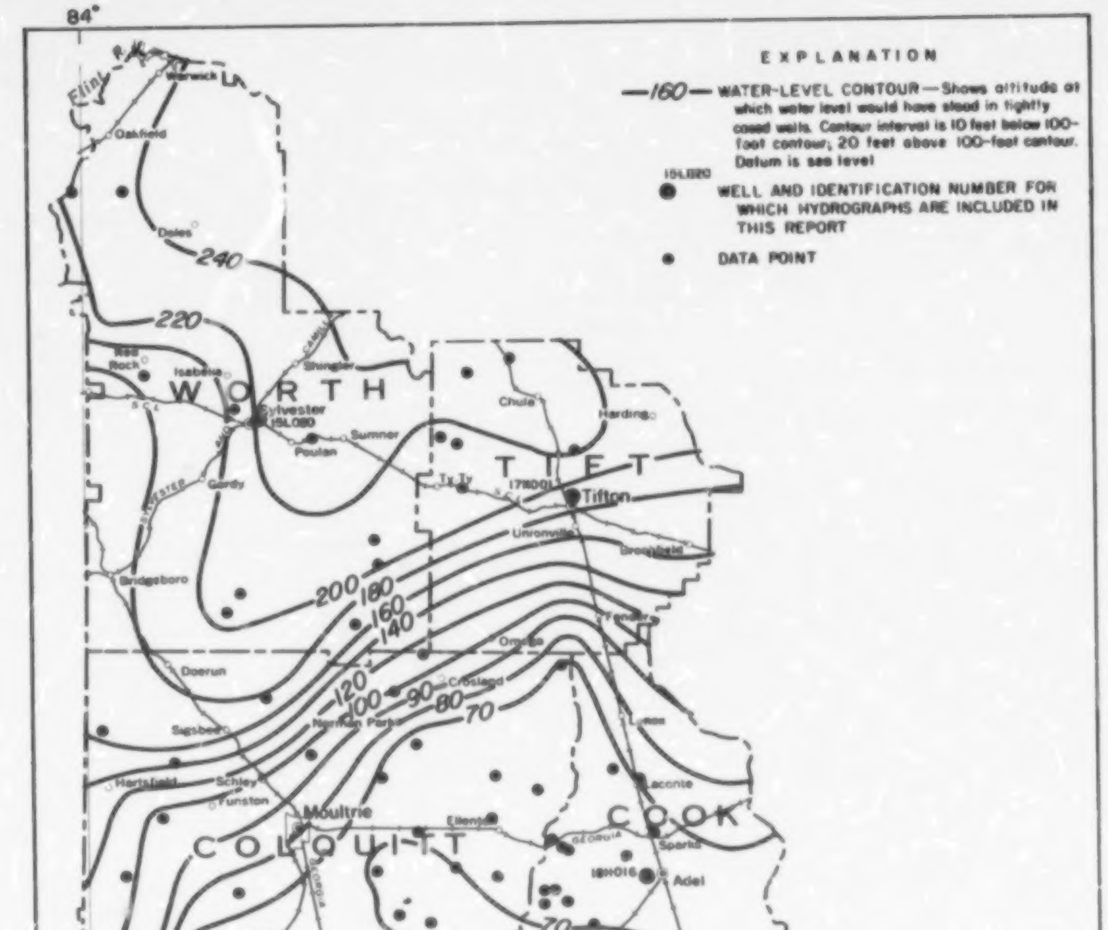

84°
31°
EXPLANATION
—160— WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Contour interval is 10 feet below 100-foot contour; 20 feet above 100-foot contour. Datum is sea level
15L020
WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPHS ARE INCLUDED IN THIS REPORT
DATA POINT
Flint R.
Warwick
Oakfield
Doles
240
220
Red Rock
Isabella
WORTH
Sylvester
15L080
Shingler
Sumner
Poulan
Gordy
Bridgeboro
Chula
Harding
TIFT
Ty Ty
Tifton
Unionville
Brookfield
200
180
160
140
120
100
90
80
70
Omega
Doerun
Crosland
Norman Park
Sigsbee
Lenox
Hartsfield
Schley
Funston
Moultrie
Ellenton
Laconte
COOK
COLQUITT
Sparks
18H016
Adel
Murphy
Berlin
Cecil
80
90
Barney
Barretts
Hahira
Morven
Bemiss
Naylor
Barwick
BROOKS
LOWNDES
Valdosta
70
Dixie
Quitman
Ousley
Kinderlou
Dasher
Grooverville
Baden
Clyattville
Twin Lakes
Lake Park
Nankin
GEORGIA
MAP AREA
Base from U.S. Geological Survey State base map, 1:500,000
0
10
20
30 MILES

Figure 2.7.2-1.—Observation well locations and the water level in the Floridan aquifer system in the south-central area, November 1982.

15L020 SYLVESTER WORTH COUNTY

313146083491601 Local number, 15L020.
LOCATION.--Lat 31°31'46", long 83°49'16", Hydrologic Unit 03110204, near water tank, behind VFW on U.S. Highway 82 east, Sylvester, Ga.
Owner: City of Sylvester.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 18 in., depth 450 ft, cased to 212 ft, open hole.
DATUM.--Altitude of land-surface datum is 433 ft.
Measuring point: Floor of recorder shelter, 2.90 ft above land-surface datum.
REMARKS.--Well pumped and sounded July 19, 1978. Borehole geophysical survey conducted June 5, 1975.
PERIOD OF RECORD.--May 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 191.50 ft below land-surface datum, May 17, 1973; lowest, 201.59 ft below land surface datum, July 31, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	198.69	198.09	197.81	197.42	197.34	197.33	197.96	198.88	199.20	199.02	199.33	199.02
2	198.69	197.92	197.93	197.20	197.26	197.53	197.95	198.91	199.20	199.02	199.32	198.96
3	198.57	198.19	198.00	197.33	197.14	197.56	197.96	198.85	199.20	198.99	199.23	198.73
4	198.75	198.43	197.95	197.49	197.17	197.55	197.95	198.82	199.30	198.92	199.06	198.71
5	198.71	198.39	197.73	197.51	197.27	197.56	197.86	198.81	199.30	198.89	199.06	198.79
6	198.65	198.09	197.75	197.50	197.37	197.58	197.88	198.75	199.30	198.94	199.13	198.66
7	198.56	198.23	197.67	197.44	197.36	197.53	197.94	198.63	199.30	199.00	199.09	198.94
8	198.47	198.35	197.62	197.31	197.25	197.54	198.00	198.60	199.30	199.03	199.04	198.97
9	198.38	198.26	197.67	197.27	197.32	197.63	197.93	198.64	199.30	199.04	198.96	199.02
10	198.33	197.99	197.69	197.37	197.43	197.75	197.85	198.70	199.30	199.02	198.81	199.00
11	198.28	198.17	197.73	197.36	197.44	197.77	197.90	198.65	199.30	198.95	198.88	198.75
12	198.41	198.38	197.74	197.39	197.38	197.74	197.98	198.56	199.20	198.87	198.97	198.56
13	198.51	197.95	197.72	197.37	197.37	197.72	198.06	198.56	199.10	198.86	198.94	198.58
14	198.45	198.01	197.68	197.27	197.36	197.71	198.10	198.69	199.10	199.03	198.93	198.43
15	198.29	198.12	197.53	197.25	197.30	197.67	198.10	198.79	199.20	199.05	198.86	198.68
16	198.29	198.00	197.28	197.33	197.27	197.71	198.16	198.80	199.20	199.05	198.95	198.93
17	198.24	198.02	197.06	197.26	197.45	197.80	198.24	198.78	199.20	199.03	199.06	198.99
18	198.37	198.11	197.33	197.04	197.52	197.84	198.28	198.76	199.20	198.98	199.09	198.90
19	198.50	198.14	197.51	197.12	197.35	197.89	198.34	198.76	199.20	198.97	199.01	198.79
20	198.35	198.30	197.33	197.23	197.55	197.92	198.42	198.73	199.20	198.97	198.75	198.83
21	198.15	198.24	197.46	197.29	197.48	197.92	198.50	198.80	199.00	199.00	198.95	198.87
22	198.25	197.94	197.73	197.19	197.38	197.91	198.50	198.88	199.10	198.97	199.03	198.73
23	198.27	197.88	197.72	196.80	197.30	197.97	198.52	198.93	199.20	198.76	198.89	198.71
24	198.39	197.85	197.42	196.99	197.29	197.96	198.52	199.00	199.30	198.79	198.62	198.77
25	198.43	197.98	197.70	197.26	197.27	197.89	198.55	199.03	199.20	198.86	198.91	198.99
26	198.40	198.17	197.74	197.36	197.23	197.94	198.59	199.03	199.20	198.90	198.99	199.00
27	198.27	198.04	197.49	197.39	197.29	197.98	198.70	199.02	199.10	199.03	198.83	198.96
28	198.41	197.65	197.59	197.38	197.31	197.96	198.80	198.97	199.00	199.24	198.68	198.72
29	198.39	---	197.74	197.38	197.25	197.92	198.86	198.91	199.01	199.25	198.86	198.82
30	198.31	---	197.66	197.36	197.16	197.93	198.87	199.00	199.01	199.25	198.98	199.22
31	198.33	---	197.45	---	197.19	---	198.87	199.10	---	199.31	---	199.39
MEAN	198.42	198.10	197.63	197.30	197.33	197.76	198.26	198.82	199.19	199.00	198.97	198.85

CAL YR 1983 MEAN 198.30 HIGH 196.80 LOW 199.39

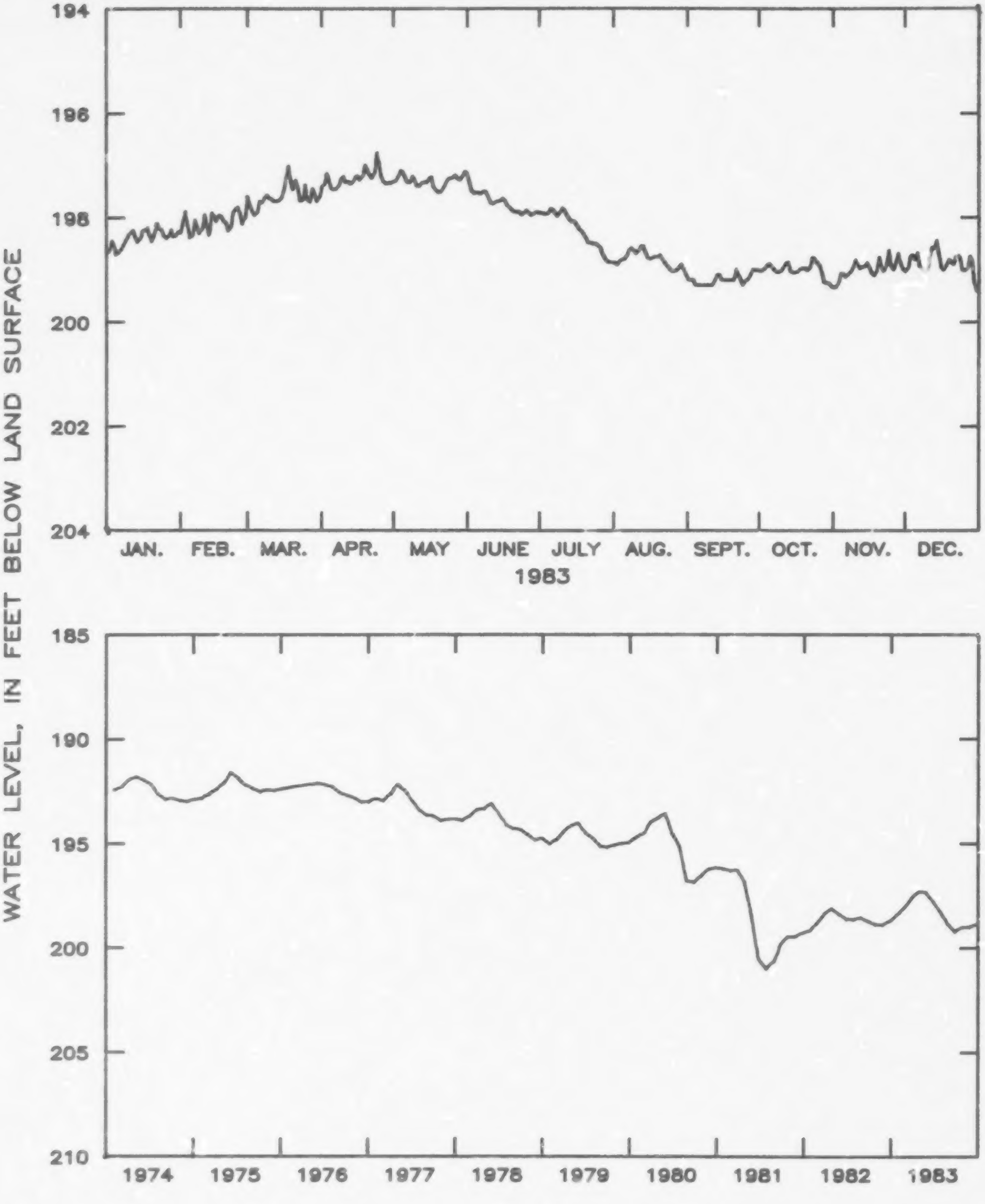


Figure 2.7.2-2.--Water level in observation well 15L020, Worth County.

17K001 SCL RAILROAD TIFT COUNTY

312716083304801 Local number, 17K001.
LOCATION.--Lat 31°27'16", long 83°30'48", Hydrologic Unit 03110204, along the Atlantic Coast Line Railroad, approximately 50 yards north of intersection of Seaboard Coast Line and the Southern Railroads.
Owner: Seaboard Coast Line Railroad.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 12 in., depth 312, cased to 110 ft, open hole.
DATUM.--Altitude of land-surface datum is 345 ft.
Measuring point: Floor of recorder shelter, 2.70 ft above land-surface datum.
REMARKS.--Well sounded April 15, 1977; obstruction at 120 ft. Water levels for periods of missing recorder record, February 14 to March 20, April 25 to May 22, November 14, and December 5-6 and 26-31, were estimated.
PERIOD OF RECORD.--February 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.02 ft below land-surface datum, April 5, 1[illegible]6; lowest, 141.86 ft below land-surface datum, July 30, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	137.49	135.75	135.36	135.47	135.12	136.33	136.60	138.60	139.20	138.53	138.77	137.92
2	137.42	135.80	135.76	135.22	135.22	136.66	136.50	138.50	139.00	138.45	138.81	137.82
3	137.39	135.79	135.70	135.32	135.20	136.78	136.40	138.30	138.80	138.50	138.72	137.56
4	137.41	135.84	135.74	135.47	135.18	136.78	136.30	138.10	138.60	138.57	138.55	137.47
5	137.31	135.83	135.54	135.65	135.27	136.58	136.30	138.00	138.60	138.66	138.42	137.59
6	137.21	135.82	135.49	135.64	135.13	136.50	136.30	137.90	138.70	138.82	138.33	137.71
7	137.11	135.74	135.43	135.66	134.99	136.35	136.40	137.70	138.80	139.01	138.33	137.83
8	136.82	135.75	135.42	135.54	135.15	136.23	136.50	137.60	138.90	138.95	138.37	137.74
9	136.83	135.64	135.57	135.31	135.23	136.25	136.50	137.80	139.00	138.79	138.39	137.79
10	136.86	135.30	135.61	135.30	135.36	136.31	136.40	137.80	139.20	138.83	138.20	137.62
11	136.83	135.47	135.68	135.35	135.19	136.24	136.50	137.90	139.10	138.80	138.23	137.32
12	136.79	135.41	135.66	135.43	135.23	136.16	136.80	137.90	139.00	138.83	138.23	137.22
13	136.85	135.25	135.48	135.47	135.59	136.15	137.20	137.90	138.90	138.71	138.14	137.25
14	136.80	135.13	135.63	135.47	135.52	136.37	137.40	137.80	138.90	138.72	138.14	137.15
15	136.58	135.42	135.67	135.42	135.60	136.53	137.60	137.90	138.90	138.65	138.13	137.31
16	136.44	135.40	135.51	135.35	135.73	136.87	137.60	138.10	138.90	138.51	138.23	137.51
17	136.39	135.29	135.20	135.17	135.81	137.04	137.70	138.40	138.80	138.52	138.31	137.51
18	136.42	135.45	135.35	134.98	135.64	137.02	137.90	138.60	138.70	138.59	138.34	137.31
19	136.50	135.43	135.58	135.05	135.60	136.95	138.10	138.80	138.80	138.67	138.18	137.36
20	136.47	135.46	135.42	135.15	135.53	137.06	138.40	139.00	138.70	138.74	137.94	137.42
21	136.26	135.59	135.51	135.30	135.46	137.02	138.60	138.80	138.50	138.74	138.14	137.39
22	136.20	135.53	135.78	135.21	135.36	136.97	138.80	138.80	138.50	138.56	138.20	137.26
23	136.23	135.35	135.79	134.83	135.34	136.97	138.90	139.10	138.60	138.23	138.08	137.16
24	136.33	135.35	135.46	134.92	135.36	136.86	138.50	139.40	138.50	138.31	137.84	137.08
25	136.14	135.42	135.72	135.02	135.55	136.74	138.70	139.20	138.40	138.38	137.97	137.05
26	135.95	135.65	135.72	134.75	135.64	136.69	139.00	139.00	138.40	138.42	137.92	137.26
27	136.07	135.50	135.45	134.54	135.91	136.69	139.40	139.00	138.50	138.59	137.67	137.23
28	136.15	135.25	135.60	134.73	136.10	136.71	139.50	138.90	138.50	138.76	137.66	137.10
29	136.15	---	135.79	134.92	135.99	136.70	139.50	138.80	138.51	138.65	137.83	136.93
30	136.02	---	135.74	134.95	135.92	136.70	139.10	139.10	138.58	138.54	137.91	137.18
31	135.81	---	135.54	---	136.12	---	138.80	139.20	---	138.66	---	137.31
MEAN	136.62	135.52	135.58	135.22	135.49	136.64	137.68	138.45	138.75	138.64	138.20	137.40

CAL YR 1983 MEAN 137.03 HIGH 134.54 LOW 13[illegible].50

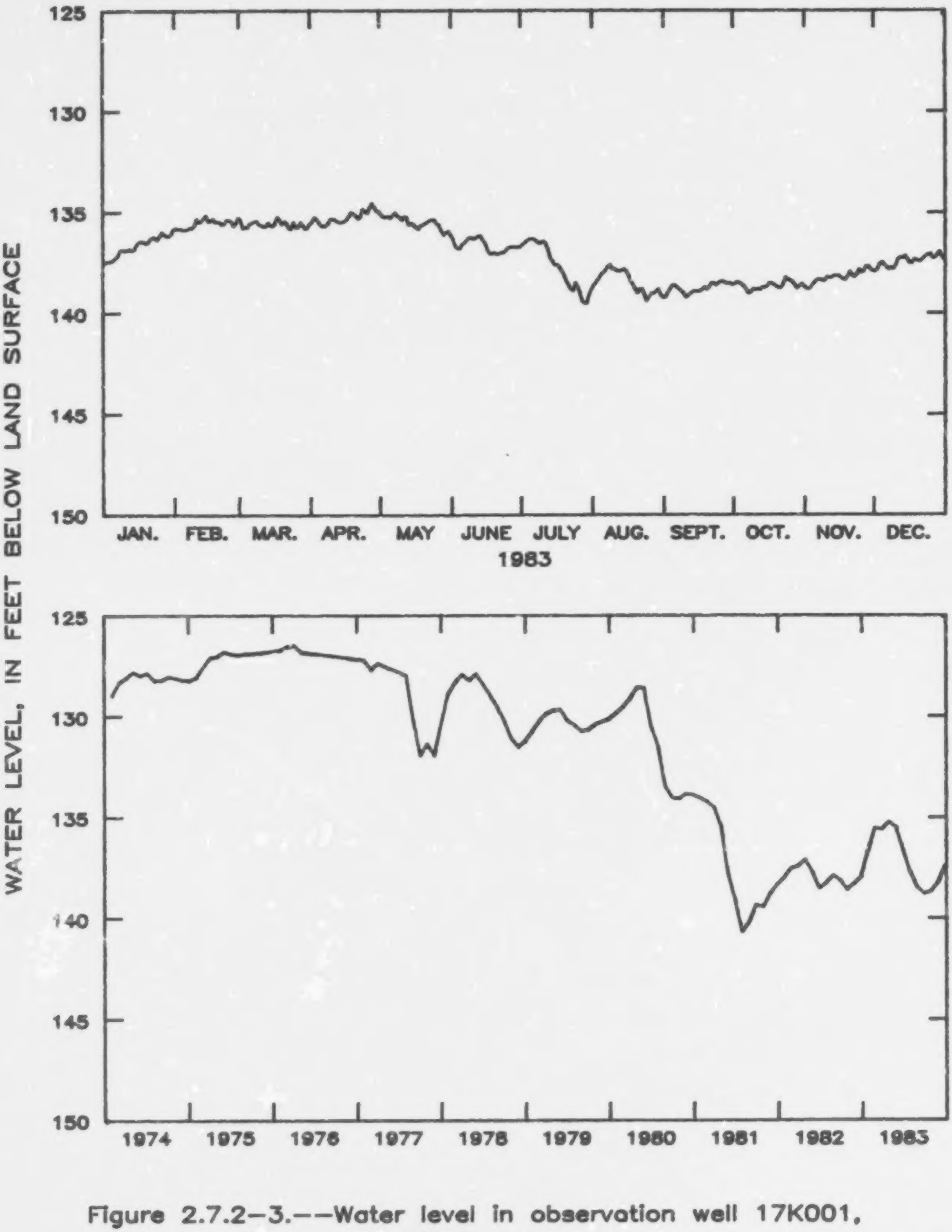


Figure 2.7.2-3.--Water level in observation well 17K001, Tift County.

18H016 ADEL COOK COUNTY

310813083260301 Local number, 18H016.
LOCATION.--Lat 31°08'13", long 83°26'03", Hydrologic Unit 03110203, on West Second Street near intersection of Georgia Highways 76 and 37.
Owner: U.S. Geological Survey, Adel test well.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 865 ft, cased to 207 ft, open hole.
DATUM.--Altitude of land-surface datum is 241 ft.
Measuring point: Floor of recorder shelter, 2.66 ft above land-surface datum.
REMARKS.--Well pumped July 19, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted October 24, 1974. Water levels for periods of missing recorder record, January 3-18 and October 22 to December 6, were estimated.
PERIOD OF RECORD.--December 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 163.34 ft below land-surface datum, July 5, 1966; lowest, 173.87 ft below land-surface datum, June 30, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	171.25	171.06	170.49	169.99	169.84	169.98	170.32	171.11	171.86	171.40	171.60	171.28
2	171.15	170.79	170.66	169.82	169.95	170.02	170.29	171.18	171.77	171.32	171.66	171.19
3	171.19	170.96	170.77	170.06	169.72	170.19	170.23	171.10	171.46	171.26	171.59	170.95
4	171.28	171.25	170.79	170.26	169.66	170.19	170.13	171.10	171.20	171.37	171.43	170.88
5	171.27	171.22	170.56	170.32	169.79	170.11	170.18	171.10	171.19	171.38	171.32	171.02
6	171.24	170.70	170.39	170.36	169.82	170.04	170.28	170.83	171.28	171.38	171.25	171.15
7	171.21	170.86	170.39	170.26	169.85	169.97	170.38	170.67	171.41	171.48	171.27	171.29
8	170.99	171.20	170.35	170.24	169.77	169.88	170.53	170.79	171.45	171.57	171.32	171.29
9	171.09	171.16	170.47	170.02	169.73	169.60	170.59	171.08	171.47	171.54	171.36	171.31
10	171.19	170.91	170.48	170.11	169.92	170.05	170.42	171.17	171.53	171.38	171.19	171.29
11	171.23	170.96	170.53	170.18	170.01	170.15	170.71	171.17	171.59	171.44	171.24	170.93
12	171.27	171.15	170.48	170.22	169.95	170.12	170.90	171.08	171.45	171.38	171.25	170.73
13	171.41	170.84	170.27	170.20	169.96	170.03	171.09	170.98	171.40	171.35	171.18	170.85
14	171.43	170.69	170.39	170.13	169.98	170.17	171.26	170.97	171.25	171.37	171.20	170.86
15	171.29	170.95	170.40	170.04	169.86	170.26	171.27	171.09	171.29	171.42	171.21	170.94
16	171.22	170.90	170.12	169.95	169.69	170.39	171.28	171.28	171.35	171.28	171.32	171.20
17	171.25	170.77	169.87	169.78	169.86	170.55	171.38	171.29	171.36	171.20	171.42	171.23
18	171.31	170.90	170.00	169.80	169.94	170.76	171.34	171.32	171.35	171.36	171.47	171.08
19	171.51	170.85	170.20	169.98	169.96	170.63	171.46	171.39	171.29	171.36	171.33	170.98
20	171.34	170.85	170.01	170.16	169.94	170.05	171.79	171.44	171.32	171.38	171.10	171.12
21	171.22	170.95	170.07	170.12	169.98	170.75	171.79	171.39	171.28	171.38	171.32	171.18
22	171.19	170.86	170.61	169.79	169.86	170.70	171.78	171.37	171.28	171.22	171.40	171.03
23	171.08	170.65	170.48	169.55	169.72	170.60	171.80	171.69	171.35	170.90	171.30	170.82
24	171.24	170.63	170.22	169.83	169.77	170.58	171.44	171.86	171.34	171.00	171.07	170.82
25	171.39	170.67	170.49	169.94	169.64	170.46	171.05	171.91	171.28	171.09	171.22	171.34
26	171.33	170.87	170.39	170.03	169.80	170.35	171.20	171.90	171.31	171.15	171.19	171.42
27	171.19	170.69	170.05	170.05	169.96	170.41	171.28	171.90	171.30	171.33	170.46	171.39
28	171.23	170.41	170.25	170.06	170.00	170.50	171.18	171.92	171.30	171.52	170.96	171.07
29	171.23	---	170.51	170.06	169.95	170.40	171.31	171.83	171.33	171.43	171.15	171.02
30	171.01	---	170.35	169.93	169.79	170.34	171.30	171.88	171.38	171.34	171.25	171.53
31	171.08	---	170.22	---	169.76	---	171.22	171.93	---	171.47	---	171.77
MEAN	171.24	170.88	170.36	170.04	169.85	170.27	171.01	171.35	171.38	171.34	171.27	171.13

CAL YR 1983 MEAN 170.84 HIGH 169.55 LOW 171.93

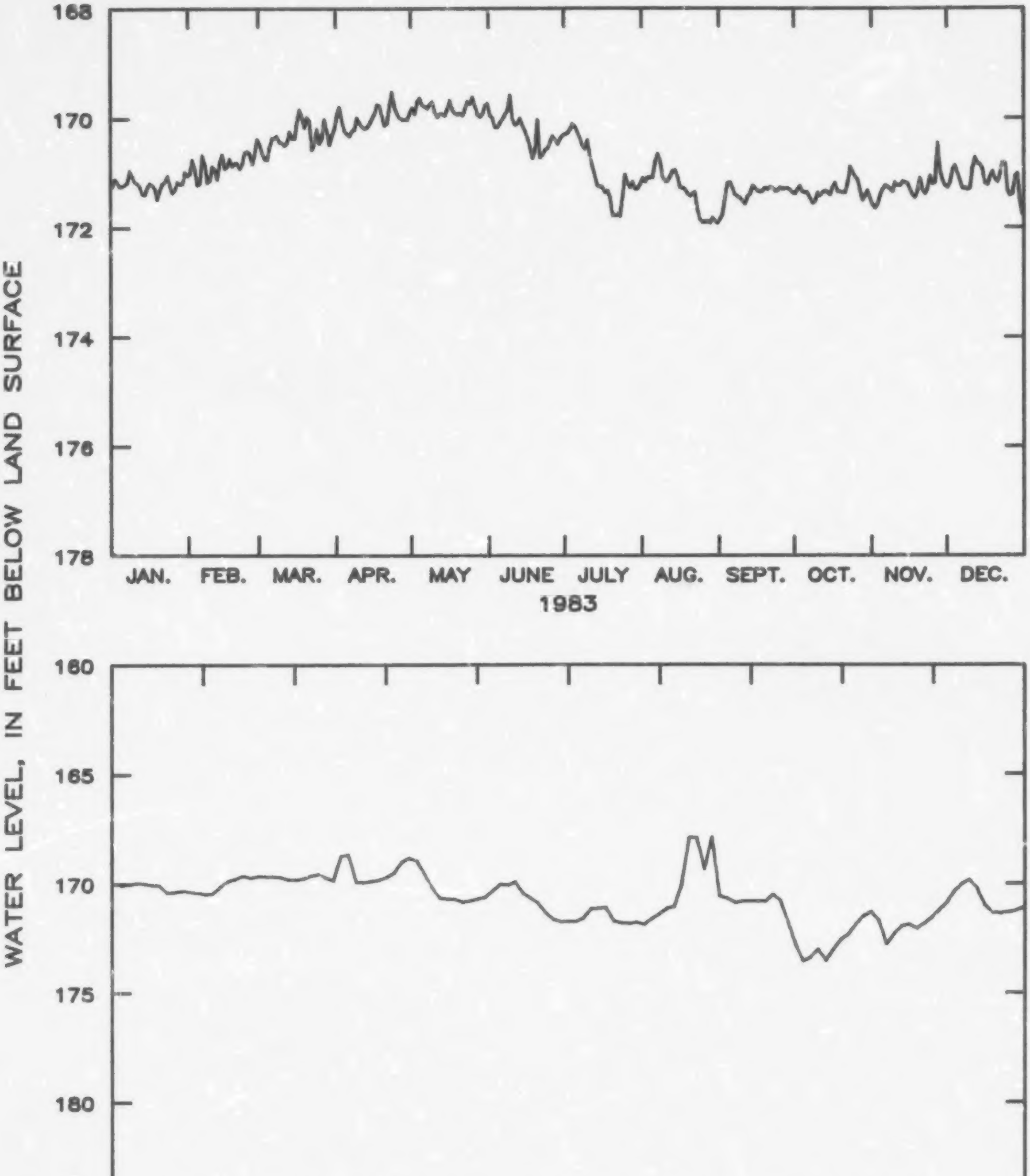


Figure 2.7.2–4.––Water level in observation well 18H016, Cook County.

19F039 VALDOSTA 8 LOWNDES COUNTY

305241083154401 Local number, 19F039.
LOCATION.--Lat 30°52'41", long 83°15'44", Hydrologic Unit 03110203, at water tank by Valdosta High School.
Owner: City of Valdosta, well 8.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 450 ft, cased to 350 ft, open hole.
DATUM.--Altitude of land-surface datum is 222 ft.
Measuring point: Pump base, 1.40 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, May 24-31, July 12 to October 11, and October 13 to December 31, were estimated.
PERIOD OF RECORD.--February 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 114.81 ft below land-surface datum, April 18, 1983; lowest, 145.67 ft below land-surface datum, October 24, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	126.60	121.73	118.28	115.85	115.48	120.82	120.71	126.84	131.20	129.59	141.66	131.49
2	126.17	121.43	118.28	115.72	115.77	121.13	120.79	126.62	129.93	130.35	141.93	131.23
3	125.89	121.31	118.36	115.85	116.19	121.37	120.55	126.20	129.07	131.60	141.97	130.87
4	125.75	121.31	118.47	116.17	116.68	121.42	120.59	125.81	128.73	132.42	141.88	130.59
5	125.14	121.25	118.56	116.39	117.09	121.31	120.53	125.70	128.19	133.46	141.97	130.40
6	124.70	121.06	118.36	116.65	117.49	121.16	121.11	125.62	127.89	134.75	141.96	130.06
7	124.32	121.05	117.28	116.84	117.85	120.80	122.05	125.15	127.85	136.14	141.87	129.96
8	123.95	121.08	116.68	116.92	117.99	120.56	122.35	125.31	128.10	137.62	141.82	129.59
9	123.65	120.97	116.46	116.67	118.25	120.54	123.06	125.86	129.05	138.68	141.71	129.38
10	123.48	120.80	116.28	116.40	118.51	120.61	124.81	125.95	130.42	137.99	141.31	129.04
11	123.45	120.94	116.25	116.14	118.49	120.65	125.51	125.07	131.02	137.66	141.25	128.35
12	123.63	121.11	116.30	115.99	118.55	120.71	125.84	126.30	131.38	138.31	141.18	127.88
13	123.82	120.90	116.40	115.91	118.57	120.88	126.12	126.29	130.48	138.89	141.13	127.33
14	123.96	120.25	116.52	115.90	118.68	121.04	126.18	126.20	128.93	139.37	141.12	126.87
15	123.89	119.85	116.66	115.70	118.85	121.22	126.31	126.10	128.50	139.59	141.11	126.74
16	123.88	119.45	116.74	115.39	118.95	121.51	127.12	126.20	128.25	139.83	141.10	126.70
17	123.64	119.14	116.63	115.03	119.20	121.78	128.03	126.16	128.11	140.01	141.93	126.58
18	123.74	118.86	116.56	114.81	118.47	121.96	128.53	126.24	128.23	140.32	141.75	126.19
19	124.22	118.63	116.46	114.85	119.66	122.13	129.53	126.44	129.15	140.56	141.58	125.63
20	124.06	118.62	116.22	115.00	119.83	122.32	129.97	126.74	128.86	140.58	141.40	125.18
21	123.80	118.60	116.07	115.13	120.00	122.08	130.28	127.02	128.37	140.81	137.98	124.57
22	123.17	118.49	116.16	115.26	120.22	121.91	130.63	127.86	128.06	140.96	136.60	124.05
23	122.72	118.42	116.07	115.08	120.25	121.66	130.37	128.91	127.96	140.79	135.77	124.00
24	122.54	118.43	115.92	114.88	120.33	121.15	128.80	129.72	127.94	140.79	135.44	123.86
25	122.51	118.50	116.09	114.84	120.48	120.44	128.10	130.35	127.66	140.80	134.19	123.89
26	122.51	118.77	116.09	114.89	120.15	120.05	128.02	130.40	127.52	140.96	133.31	124.02
27	122.29	118.75	115.96	114.88	120.00	120.19	127.56	130.62	127.71	141.11	132.69	124.36
28	122.08	118.43	116.01	114.89	119.92	120.56	127.13	131.02	128.10	141.26	132.25	123.93
29	121.88	---	116.13	114.98	119.95	120.82	127.00	130.86	128.41	141.37	132.00	123.41
30	121.76	---	116.08	115.17	120.09	120.72	126.92	130.89	128.90	141.48	131.73	123.35
31	121.79	---	115.89	---	120.40	---	126.89	131.45	---	141.47	---	123.06
MEAN	123.71	119.93	116.71	115.61	118.79	121.12	125.85	127.42	128.80	138.37	139.12	126.86

CAL YR 1983 MEAN 125.22 HIGH 114.81 LOW 141.97

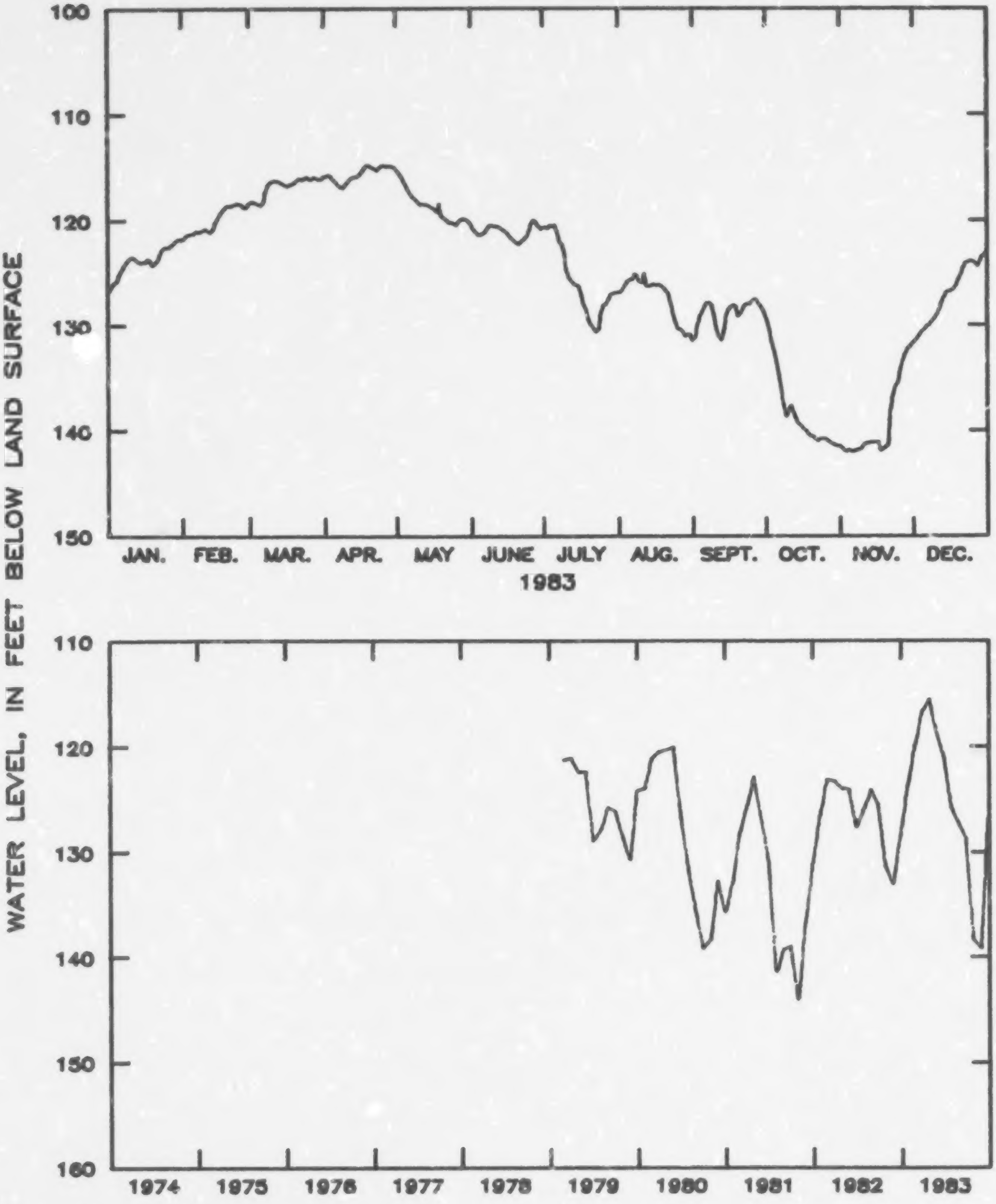


Figure 2.7.2-5.---Water level in observation well 19F039, Lowndes County.

304949083165301 Local number, 19E009.
LOCATION.--Lat 30°49'51", long 83°16'59", Hydrologic Unit 03110202, N. Oak Street, one block north of intersection with U.S. Highway 84, Valdosta, Ga.
Owner: City of Valdosta.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal supply well, diameter 20 in., depth 342 ft, cased to 200 ft open hole.
DATUM.--Altitude of land-surface datum is 217 ft.
Measuring point: Top of casing, 1.7 ft above land-surface datum.
REMARKS.--Well pumped July 18, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted April 11, 1963.
PERIOD OF RECORD.--February 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 112.69 ft below land-surface datum, March 9, 1964; lowest, 145.50 ft below land-surface datum, October 22, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	131.32	128.51	123.48	121.08	120.30	126.05	125.91	129.11	133.38	133.19	138.00	132.56
2	130.78	128.61	124.07	120.39	120.88	125.60	125.76	128.70	132.54	133.11	138.69	132.63
3	130.97	127.93	123.93	121.12	120.86	126.03	125.37	128.90	131.83	133.58	138.34	132.42
4	131.16	127.52	123.58	121.25	121.68	126.31	124.96	128.51	131.80	133.79	138.12	131.88
5	131.24	127.16	123.80	121.42	121.75	125.71	125.66	128.29	131.02	135.06	138.29	131.78
6	130.67	126.52	123.30	122.24	121.98	125.63	126.30	128.80	130.81	134.90	138.02	131.60
7	130.20	126.86	122.91	122.04	122.21	124.86	126.47	128.73	131.26	135.12	138.38	131.96
8	129.80	127.30	123.00	121.76	122.17	125.22	126.27	128.58	131.38	135.79	136.96	131.42
9	129.33	126.95	123.34	122.20	122.35	125.13	126.67	128.64	133.85	135.69	139.46	131.59
10	128.72	126.83	123.46	121.27	122.55	125.12	126.85	128.94	134.81	135.50	138.53	131.44
11	129.09	126.50	122.63	121.76	123.43	125.01	126.75	129.25	133.81	134.55	138.63	130.74
12	129.35	126.13	122.00	121.73	122.95	124.87	127.31	129.07	133.87	134.22	139.12	130.13
13	129.58	125.56	121.85	122.14	123.20	125.39	128.95	129.20	133.04	134.09	138.66	130.01
14	129.91	125.74	122.18	122.08	123.31	125.45	129.09	129.19	132.37	134.15	138.58	130.23
15	129.26	126.13	121.85	121.13	122.94	125.86	128.48	129.10	131.88	134.65	138.96	129.83
16	128.86	126.00	121.88	121.13	123.17	125.85	129.10	128.86	131.52	134.74	139.39	129.99
17	129.32	126.23	121.95	120.55	123.76	126.21	129.57	129.57	131.83	134.85	139.24	129.81
18	131.68	125.54	121.63	120.25	124.00	126.82	130.15	129.29	131.80	135.18	139.68	130.01
19	130.02	124.95	121.29	120.70	124.03	126.60	131.07	129.55	132.14	136.00	139.93	130.46
20	129.71	124.75	120.96	121.19	124.12	126.37	132.25	130.05	131.99	136.27	138.78	130.53
21	131.40	124.56	120.81	120.45	124.30	126.09	131.77	130.32	132.06	136.12	137.15	129.65
22	130.89	124.23	121.41	120.40	124.16	126.94	132.41	130.66	132.11	136.35	136.21	128.69
23	128.54	124.85	121.88	120.44	124.33	126.61	131.91	131.61	131.74	136.00	136.11	128.07
24	128.60	124.33	120.90	119.89	124.41	126.14	130.57	133.39	131.76	136.08	135.40	127.90
25	127.96	124.71	121.17	120.08	124.91	126.16	129.80	133.10	131.89	136.39	134.29	129.64
26	129.02	124.34	121.15	119.96	124.56	125.51	130.34	132.70	132.31	136.89	133.81	131.21
27	128.55	123.57	120.86	120.91	124.58	125.59	130.03	132.91	131.36	136.98	133.72	134.47
28	128.05	123.47	121.24	120.48	124.53	126.35	129.57	133.31	132.62	137.15	132.75	133.66
29	128.37	---	121.28	120.39	124.16	126.25	129.69	132.88	131.86	137.62	132.92	132.20
30	128.11	---	121.59	120.61	124.27	125.73	129.59	133.39	132.64	137.35	133.02	132.68
31	128.37	---	121.22	---	125.06	---	129.64	134.13	---	137.69	---	132.58
MEAN	129.64	125.92	122.15	121.03	123.26	125.85	128.65	130.28	132.24	135.45	137.30	131.02

CAL YR 1983 MEAN 128.58 HIGH 119.89 LOW 139.93

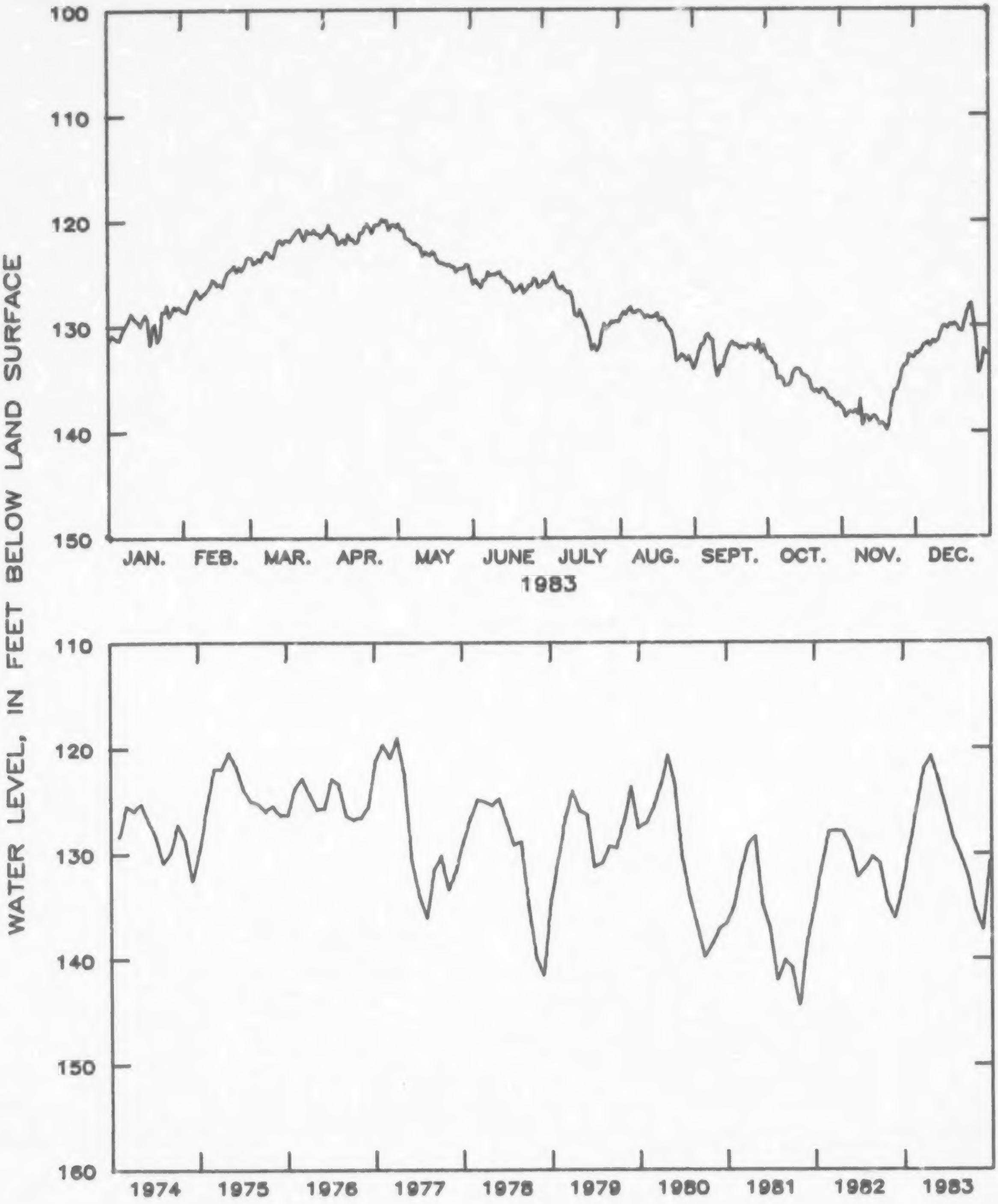


Figure 2.7.2-6.—-Water level in observation well 19E009, Lowndes County.

2.7.3 East-central area

Water levels in the Floridan aquifer system in east-central Georgia are affected by precipitation, evapotranspiration, stream stage, and pumping. Precipitation was about normal during the summer of 1982, and ground-water levels began to recover from the record lows experienced during the 1980-81 drought. This rising trend continued into 1983. The water level at well 21T001 reached a new record high in February 1983.

Mean annual water levels during 1983 ranged from about the same as in 1982 to 0.9 foot higher.

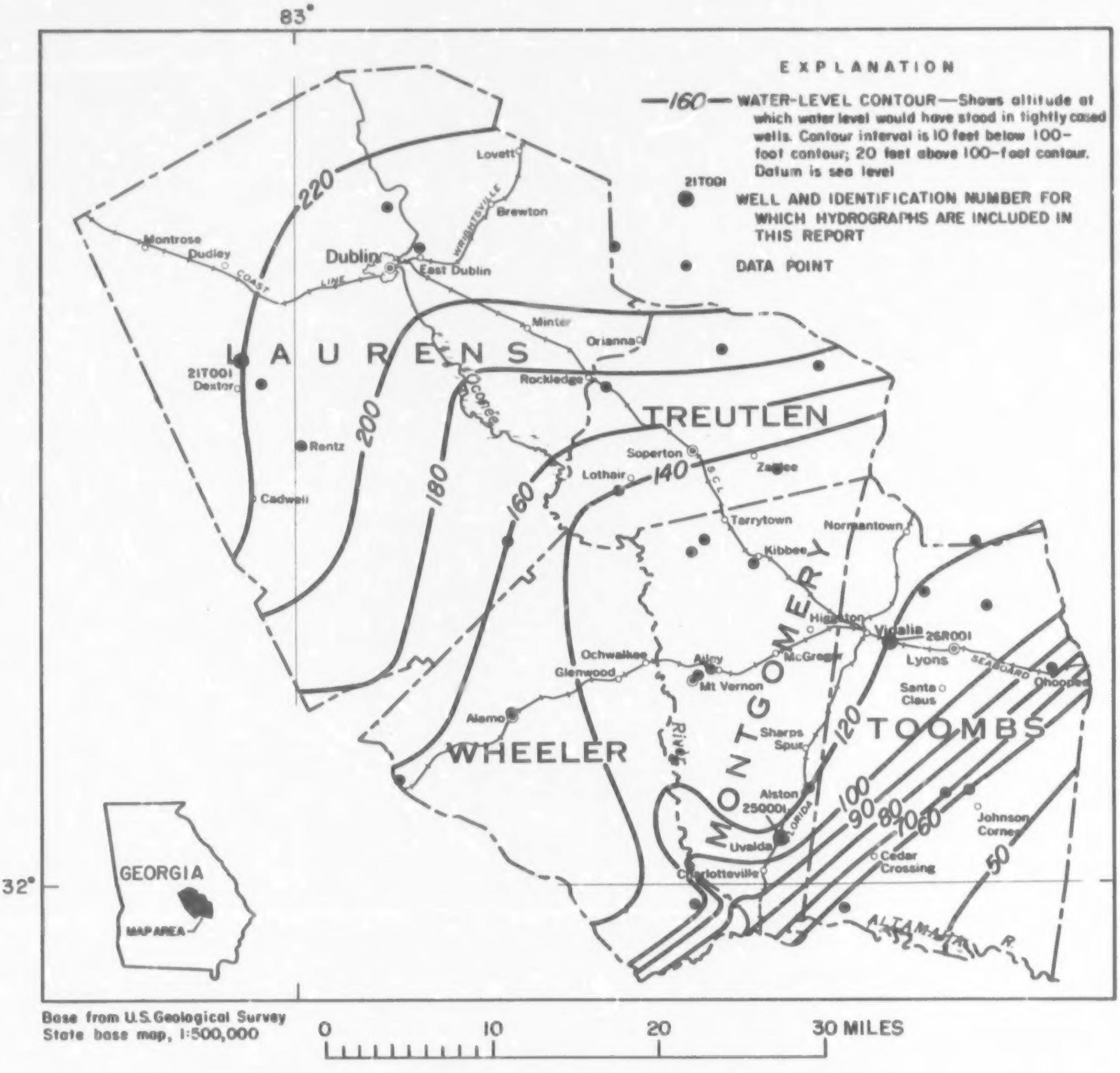

83°
32°
EXPLANATION
—160— WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Contour interval is 10 feet below 100-foot contour; 20 feet above 100-foot contour. Datum is sea level
21T001 ● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPHS ARE INCLUDED IN THIS REPORT
• DATA POINT
LAURENS
TREUTLEN
WHEELER
MONTGOMERY
TOOMBS
GEORGIA
MAP AREA
220
200
180
160
140
120
100
90
80
70
60
50
21T001
26R001
25Q001
Lovett
Brewton
Montrose
Dudley
Dublin
East Dublin
Minter
Orianna
Dexter
Rockledge
Rentz
Cadwell
Soperton
Lothair
Zaldee
Tarrytown
Normantown
Kibbee
Higgston
Vidalia
Lyons
Ochwalkee
Glenwood
Ailey
McGregor
Mt Vernon
Santa Claus
Ohoopee
Alamo
Sharps Spur
Alston
Uvalda
Charlotteville
Cedar Crossing
Johnson Corner
WRIGHTSVILLE
COAST LINE
Oconee
S.C.L.
SEABOARD
FLORIDA
River
ALTAMAHA R.
Base from U.S. Geological Survey State base map, 1:500,000
0
10
20
30 MILES

Figure 2.7.3.-1.—Observation well locations and the water level in the Floridan aquifer system in the east-central area, November 1982.

21T001 HOGAN LAURENS COUNTY

322652083033001 Local number, 21T001.
LOCATION.--Lat 32°27'06", long 83°03'28", Hydrologic Unit 03070102, approximately 1.8 mi northeast of Dexter, Ga.
Owner: Danny Hogan.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 4 in., depth 123 ft, cased to 89 ft, open hole.
DATUM.--Altitude of land-surface datum is 252 ft.
Measuring point: Floor of recorder shelter, 2.57 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted November 1973. Water levels for period of missing recorder record, March 2-22, were estimated.
PERIOD OF RECORD.--March 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.04 ft below land-surface datum, February 17-18, 1983; lowest, 39.58 ft below land-surface datum, November 12, 1968.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	26.28	25.15	24.08	24.25	26.00	29.84	31.90	34.17	32.17	31.21	33.46	28.71
2	25.90	24.98	24.09	24.24	26.09	30.02	31.75	33.69	32.21	31.31	33.50	28.46
3	25.55	24.94	24.11	24.32	26.15	30.15	31.67	32.65	32.18	31.38	33.52	28.15
4	25.37	24.95	24.12	24.48	26.23	30.26	31.63	31.61	32.17	31.46	33.52	27.92
5	25.21	24.98	24.14	24.59	26.38	30.39	31.59	30.87	32.14	31.54	33.54	27.80
6	25.09	24.88	24.15	24.66	26.54	30.51	31.53	30.35	32.02	31.66	33.62	27.60
7	25.03	24.86	24.17	24.72	26.69	30.57	31.54	29.96	31.87	31.80	33.67	26.96
8	25.01	24.91	24.18	24.75	26.79	30.54	31.61	29.70	31.79	31.91	33.71	26.60
9	25.00	24.95	24.19	24.75	26.91	30.56	31.66	29.54	31.77	32.01	33.73	26.38
10	25.00	24.94	24.21	24.72	27.09	30.63	31.70	29.45	31.77	32.08	33.73	26.22
11	25.00	24.92	24.22	24.69	27.24	30.71	31.81	29.41	31.77	32.11	33.76	26.00
12	25.06	25.03	24.36	24.69	27.37	30.79	31.94	29.39	31.79	32.15	33.84	25.67
13	25.16	25.02	24.25	24.72	27.50	30.85	32.08	29.39	31.74	32.19	33.89	25.46
14	25.21	24.60	24.27	24.75	27.63	30.95	32.19	29.47	31.50	32.30	33.93	25.29
15	25.22	24.30	24.28	24.75	27.75	31.04	32.28	29.59	31.20	32.39	33.94	25.28
16	25.29	24.15	24.30	24.76	27.84	31.16	32.38	29.73	30.93	32.45	33.94	25.33
17	25.35	24.04	24.31	24.82	27.98	31.30	32.50	29.89	30.75	32.51	34.01	25.36
18	25.47	24.04	24.32	24.83	28.15	31.41	32.63	30.04	30.64	32.56	34.06	25.33
19	25.60	24.06	24.34	24.88	28.28	31.52	32.77	30.21	30.59	32.61	34.09	25.25
20	25.66	24.14	24.35	25.00	28.37	31.60	32.90	30.40	30.55	32.69	33.96	25.25
21	25.59	24.19	24.37	25.11	28.47	31.68	33.03	30.58	30.47	32.77	33.92	25.28
22	25.52	24.16	24.38	25.21	28.54	31.72	33.13	30.77	30.48	32.83	33.92	25.23
23	25.41	24.11	24.38	25.16	28.63	31.79	33.23	30.96	30.57	32.82	33.85	25.19
24	25.35	24.24	24.33	25.15	28.76	31.84	33.33	31.15	30.66	32.82	33.49	25.19
25	25.32	24.42	24.39	25.31	28.85	31.89	33.45	31.33	30.72	32.89	32.30	25.28
26	25.31	24.48	24.49	25.47	29.00	32.02	33.57	31.47	30.77	32.97	31.28	25.32
27	25.27	24.52	24.37	25.59	29.18	32.12	33.70	31.59	30.83	33.06	30.50	25.33
28	25.28	24.11	24.31	25.69	29.32	32.13	33.85	31.68	30.90	33.19	29.86	25.27
29	25.33	---	24.32	25.80	29.44	32.12	33.96	31.80	31.01	33.23	29.39	25.26
30	25.28	---	24.33	25.90	29.54	32.05	34.06	31.95	31.11	33.31	29.00	25.38
31	25.24	---	24.26	---	29.66	---	34.15	32.11	---	33.40	---	25.45
MEAN	25.33	24.57	24.27	24.93	27.82	31.14	32.57	30.80	31.30	32.37	33.10	26.04

CAL YR 1983 MEAN 28.70 HIGH 24.04 LOW 34.17

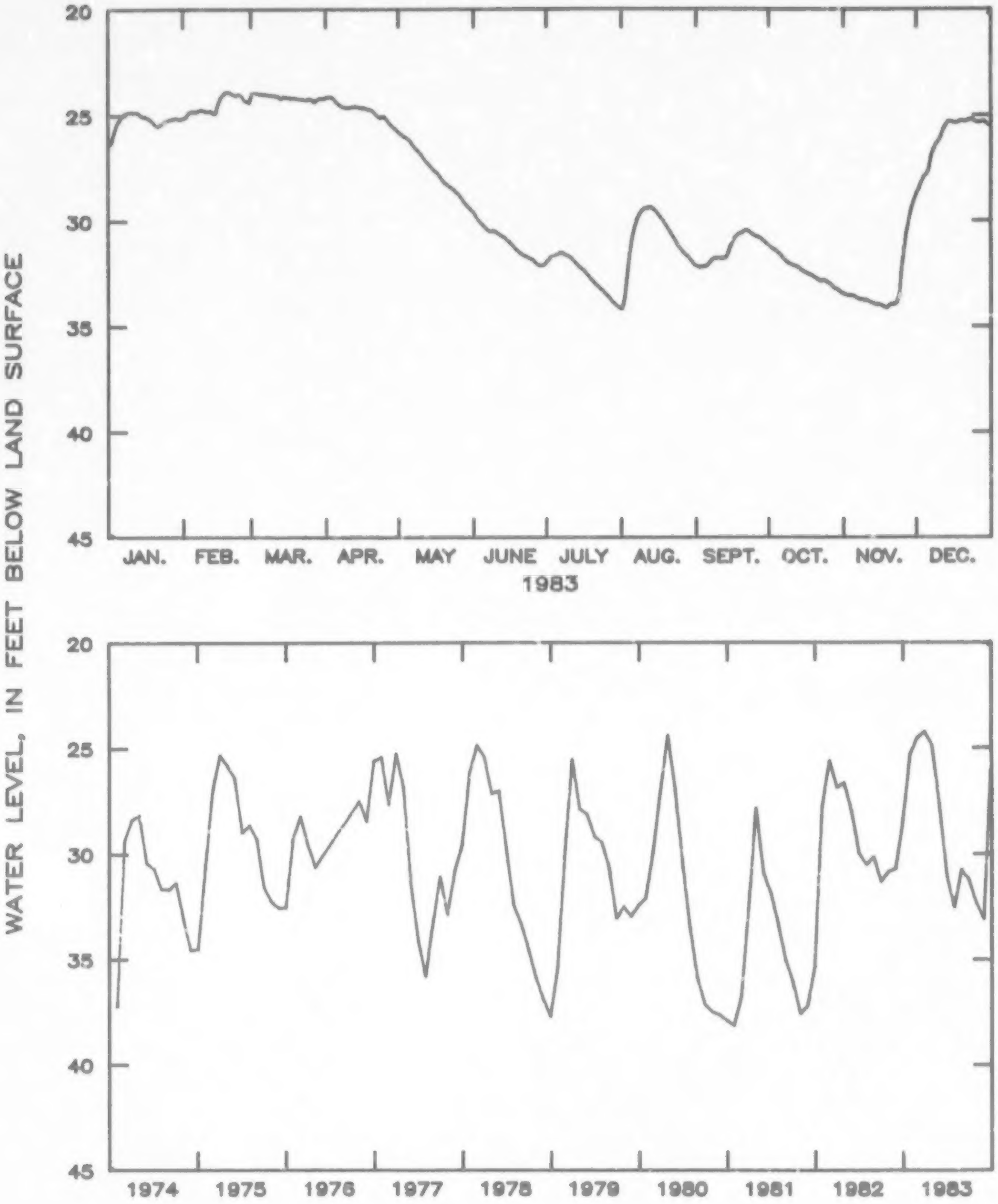


Figure 2.7.3-2.--Water level in observation well 21T001, Laurens County.

25Q001 UVALDA SCHOOL MONTGOMERY COUNTY

320226082301101 Local number, 25Q001.
LOCATION.--Lat 32°02'25", long 82°30'05", Hydrologic Unit 03070106, well is located behind the Uvalda School in the city of Uvalda.
Owner: Uvalda School.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 6 in., depth 530 ft., cased to 421, open hole.
DATUM.--Altitude of land-surface datum is 190 ft.
Measuring point: Top of 6-inch casing at land surface.
REMARKS.--Borehole geophysical survey conducted April 22, 1966.
PERIOD OF RECORD.--June 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 64.13 ft below land-surface datum, June 10, 1966; lowest, 78.9 ft below land-surface datum, October 9, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	76.12	75.59	75.15	75.12	74.96	75.18	75.76	76.09	76.30	76.80	77.23	76.77
2	75.95	75.41	75.26	75.00	74.93	75.28	75.79	75.93	76.30	76.80	77.19	76.71
3	75.96	75.51	75.33	75.07	74.85	75.28	75.84	75.92	76.30	76.70	77.11	76.60
4	76.05	75.66	75.37	75.18	74.84	75.25	75.84	75.90	76.30	76.70	77.00	76.65
5	76.02	75.68	75.34	75.18	74.91	75.24	75.78	75.89	76.30	76.70	77.02	76.71
6	75.98	75.48	75.27	75.16	74.99	75.23	75.74	75.87	76.30	76.70	77.06	76.56
7	75.95	75.51	75.22	75.13	75.02	75.21	75.79	75.83	76.30	76.80	77.04	76.69
8	75.92	75.60	75.16	75.08	74.98	75.24	75.81	75.84	76.40	76.90	77.01	76.67
9	75.89	75.56	75.20	75.02	75.01	75.33	75.79	75.88	76.40	77.00	76.93	76.66
10	75.86	75.42	75.23	75.06	75.09	75.43	75.76	75.94	76.40	77.20	76.83	76.65
11	75.81	75.46	75.25	75.06	75.12	75.48	75.78	75.97	76.40	77.30	76.87	76.52
12	75.87	75.61	75.29	75.09	75.11	75.49	75.80	75.97	76.50	77.40	76.93	76.40
13	75.93	75.50	75.33	75.11	75.11	75.50	75.83	75.99	76.40	77.40	76.92	76.40
14	75.90	75.22	75.36	75.07	75.11	75.51	75.83	76.07	76.40	77.40	76.93	76.30
15	75.79	75.34	75.34	74.97	75.09	75.52	75.82	76.13	76.50	77.40	76.87	76.42
16	75.51	75.33	75.20	74.99	75.03	75.58	75.84	76.13	76.60	77.40	76.91	76.58
17	75.79	75.28	75.02	75.01	75.12	75.65	75.85	76.12	76.60	77.30	76.97	76.61
18	75.86	75.35	75.04	74.90	75.17	75.68	75.86	76.11	76.70	77.20	76.99	76.56
19	75.93	75.37	75.17	74.90	75.16	75.71	75.86	76.11	76.70	77.20	76.94	76.43
20	75.86	75.47	75.15	74.95	75.13	75.75	75.90	76.11	76.70	77.20	76.77	76.40
21	75.68	75.47	75.12	74.98	75.09	75.77	75.93	76.12	76.60	77.20	76.87	76.37
22	75.67	75.30	75.28	74.96	75.05	75.77	75.92	76.14	76.70	77.10	76.89	76.30
23	75.67	75.19	75.31	74.71	75.02	75.80	75.92	76.17	76.80	76.98	76.78	76.30
24	75.74	75.19	75.13	74.66	75.03	75.78	75.91	76.23	76.80	77.00	76.64	76.32
25	75.77	75.24	75.27	74.80	75.04	75.76	75.91	76.28	76.80	77.04	76.75	76.44
26	75.76	75.40	75.32	74.89	75.03	75.81	75.89	76.29	76.80	77.03	76.84	76.46
27	75.66	75.40	75.15	74.93	75.10	75.65	75.96	76.27	76.70	77.10	76.78	76.42
28	75.70	75.20	75.18	74.97	75.17	75.83	76.02	76.22	76.70	77.18	76.70	76.30
29	75.71	---	75.27	74.99	75.15	75.78	76.07	76.21	76.70	77.17	76.78	76.36
30	75.64	---	75.25	74.98	75.12	75.77	76.08	76.26	76.70	77.22	76.79	76.60
31	75.67	---	75.11	---	75.12	---	76.09	76.30	---	77.24	---	76.70
MEAN	75.84	75.42	75.23	75.00	75.05	75.55	75.87	76.07	76.54	77.09	76.91	76.51

CAL YR 1983 MEAN 75.93 HIGH 74.66 LOW 77.40

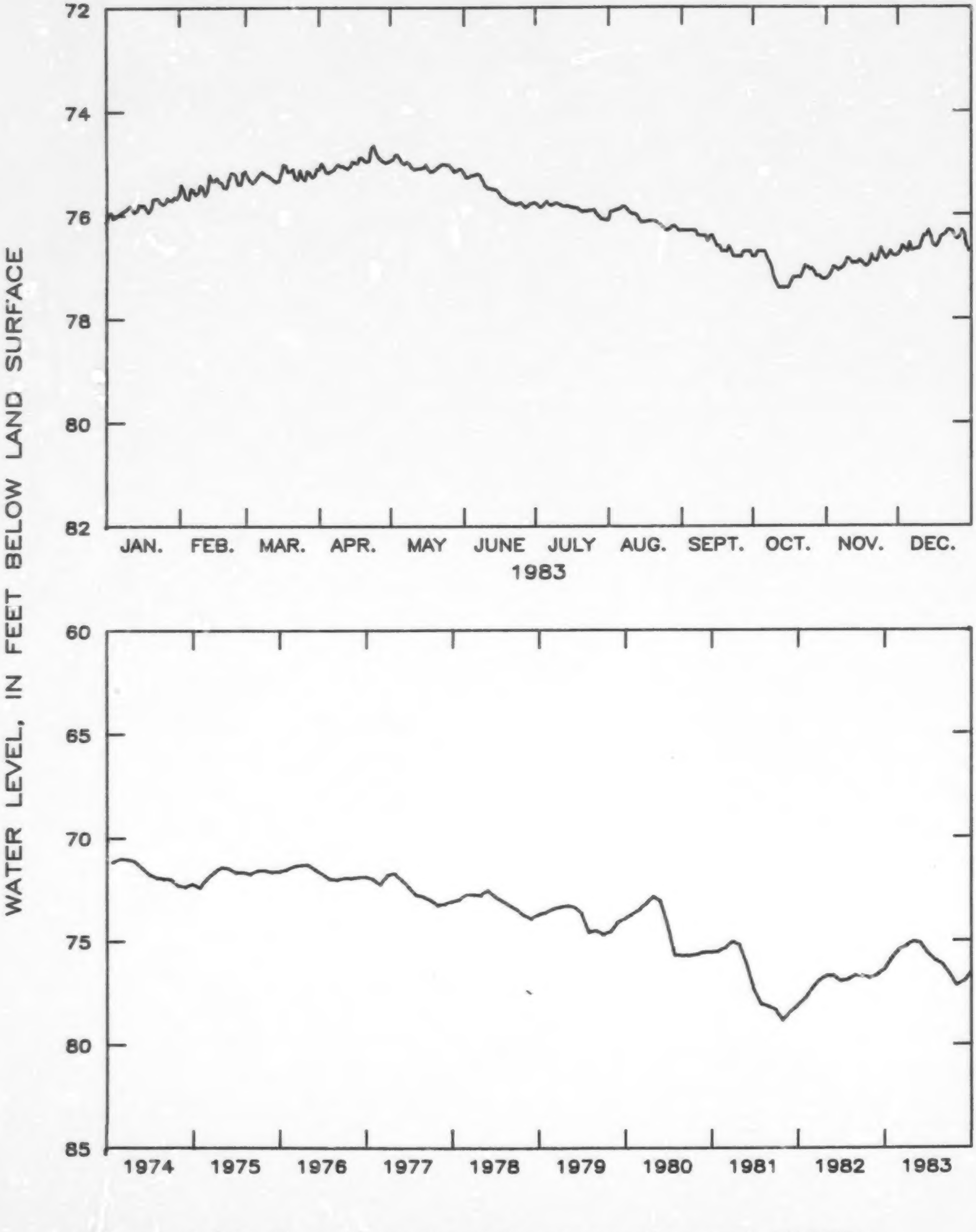


Figure 2.7.3-3.--Water level in observation well 25Q001, Montgomery County.

321302082243601 Local number, 26R001.
LOCATION.--Lat 32°13'02", long 82°24'36", Hydrologic Unit 03070107, 15 ft south of the Vidalia Water and Street Department and Fire Station.
Owner: City of Vidalia, well 2.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled municipal well, diameter 12 in., depth 1,000 ft, cased to 720 ft, open hole.
DATUM.--Altitude of land-surface datum is 285 ft.
Measuring point: Top of 12-inch casing.
REMARKS.--Water levels for period of missing recorder record, December 24-31, were estimated.
PERIOD OF RECORD.--April 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 151.64 ft below land-surface datum, April 15, 1974; lowest, 164.70 ft below land-surface datum, August 25, 1983.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	159.50	159.66	158.67	158.65	159.10	161.98	161.04	162.51	163.58	162.55	162.83	161.95
2	159.24	159.50	158.93	158.48	159.12	162.18	161.08	162.71	163.45	162.43	162.98	161.86
3	159.63	159.52	159.09	158.48	159.12	162.52	160.82	162.63	163.40	162.51	162.83	161.75
4	160.09	159.78	159.02	158.76	158.95	162.48	160.76	162.92	163.21	162.67	162.65	161.53
5	159.76	159.69	158.86	158.76	158.89	161.88	160.60	162.87	163.11	162.87	162.74	161.81
6	159.86	159.17	158.64	158.90	159.15	161.87	160.79	162.85	163.15	162.94	162.50	162.05
7	159.75	159.26	158.56	158.95	159.32	161.37	160.91	162.67	163.14	162.93	162.35	162.27
8	159.61	159.50	158.60	158.72	159.18	160.72	161.08	162.61	163.22	163.02	162.46	162.14
9	159.40	159.46	158.71	158.54	159.22	160.84	161.12	162.71	163.31	162.80	162.46	162.21
10	159.41	159.28	158.63	158.50	159.54	160.98	160.55	162.93	163.48	162.79	162.49	161.71
11	159.71	159.36	158.68	158.58	159.71	160.90	160.73	163.13	163.46	162.83	162.57	161.65
12	159.70	159.56	158.71	158.92	159.64	160.80	161.32	163.13	163.33	162.88	162.50	161.51
13	160.22	159.18	158.80	158.94	159.97	161.00	160.44	163.01	163.20	162.91	162.24	161.42
14	159.86	158.85	158.78	158.91	160.21	161.42	162.03	163.20	163.04	162.92	162.32	161.34
15	159.58	159.05	158.80	158.67	160.03	161.65	162.32	163.48	163.09	162.67	162.45	161.29
16	159.38	159.08	158.61	158.67	159.77	161.80	162.37	163.49	163.15	162.46	162.60	161.10
17	159.62	158.71	158.32	158.54	159.74	161.93	162.56	163.83	163.05	162.50	162.57	161.37
18	159.64	159.36	158.40	158.33	159.90	162.20	162.58	164.06	163.27	162.49	162.73	161.23
19	159.72	159.32	158.76	158.40	159.92	161.71	162.49	164.27	163.20	162.56	162.71	161.20
20	159.77	159.22	158.66	158.54	159.99	161.38	162.34	164.42	163.09	162.61	162.30	161.39
21	160.02	159.28	158.62	158.70	160.16	161.24	162.23	164.45	162.80	162.65	162.27	161.37
22	160.24	159.04	158.75	158.82	160.02	161.26	162.04	164.22	162.93	162.59	162.41	161.29
23	159.81	159.05	158.82	158.50	159.89	161.31	162.33	164.36	162.70	162.31	162.22	161.37
24	159.84	159.08	158.49	158.11	160.37	161.80	162.45	164.51	162.74	162.33	162.15	161.44
25	160.06	159.08	158.75	158.45	160.57	161.28	162.34	164.70	162.51	162.61	161.92	161.61
26	159.92	159.05	158.78	158.67	160.86	161.23	162.55	164.26	162.49	162.84	161.92	161.68
27	159.70	159.02	158.62	158.90	161.12	161.36	162.43	164.07	162.59	162.86	161.68	161.69
28	159.90	158.67	158.69	159.04	161.42	161.22	162.46	163.86	162.57	162.93	161.77	161.62
29	159.75	---	158.76	159.18	161.22	161.02	162.34	163.97	162.56	162.86	161.84	161.72
30	159.43	---	158.83	159.17	161.30	161.02	162.57	164.11	162.52	162.79	161.84	162.01
31	159.61	---	158.77	---	161.74	---	162.61	163.78	---	162.71	---	162.36
MEAN	159.73	159.24	158.71	158.69	159.97	161.48	161.75	163.54	163.04	162.70	162.38	161.64

CAL YR 1983 MEAN 161.09 HIGH 158.11 LOW 164.70

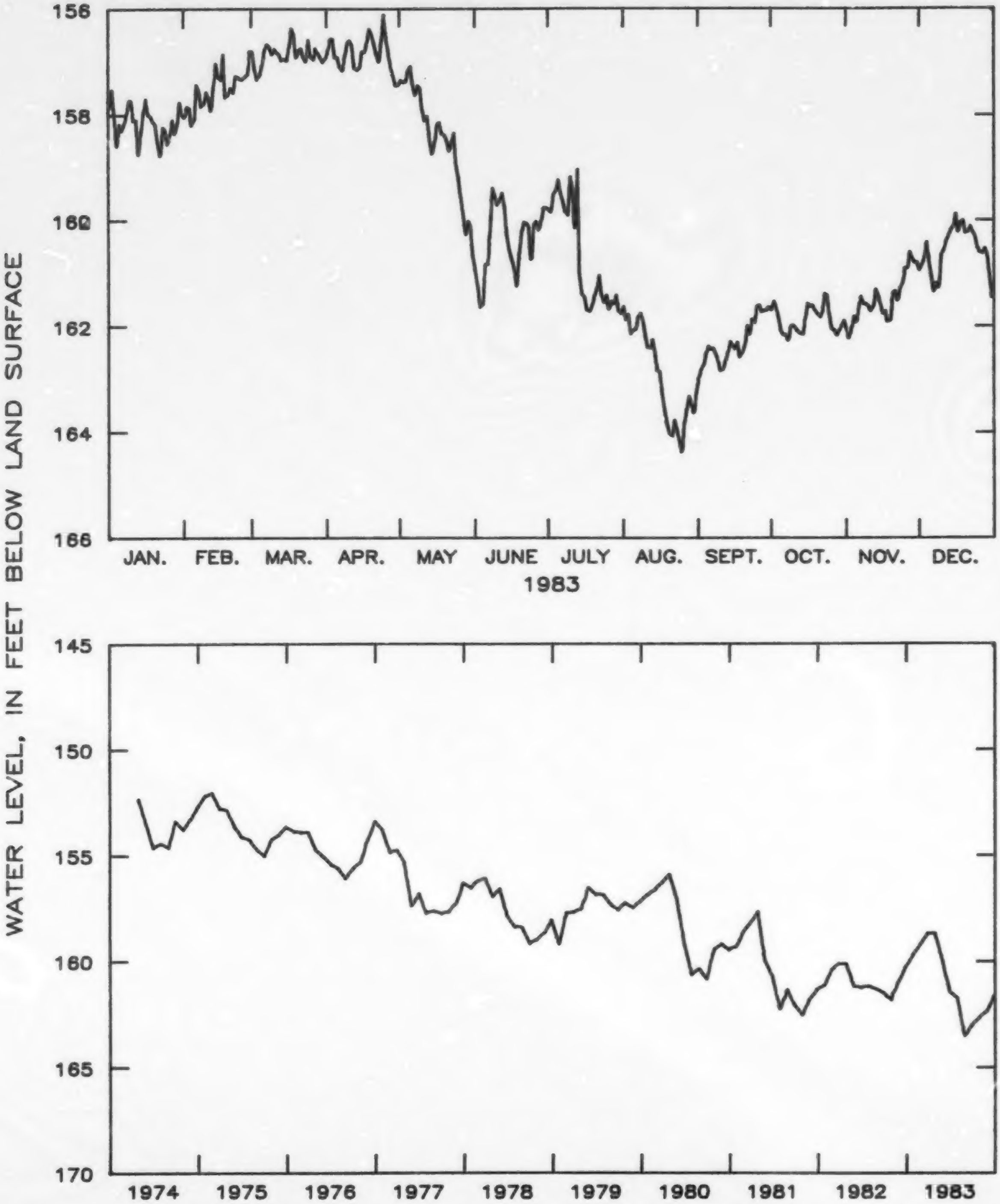


Figure 2.7.3-4.--Water level in observation well 26R001, Toombs County.

2.7.4 Coastal area

Ground-water in coastal Georgia constitutes one of the most valuable mineral resources in the area. Growth of the pulp and paper industry, as well as the chemical industry, has occurred mainly because of the presence of large supplies of ground water available at moderate depths and at small cost. Large pulp mills are located at Savannah, Jesup, Riceboro, Brunswick, and St. Marys. The combined pumpage in these areas is about 300 Mgal/d, about 80 percent of which is used for industrial purposes. All of the ground water is pumped from the Floridan aquifer system (Wait and Gregg, 1973, p. 9).

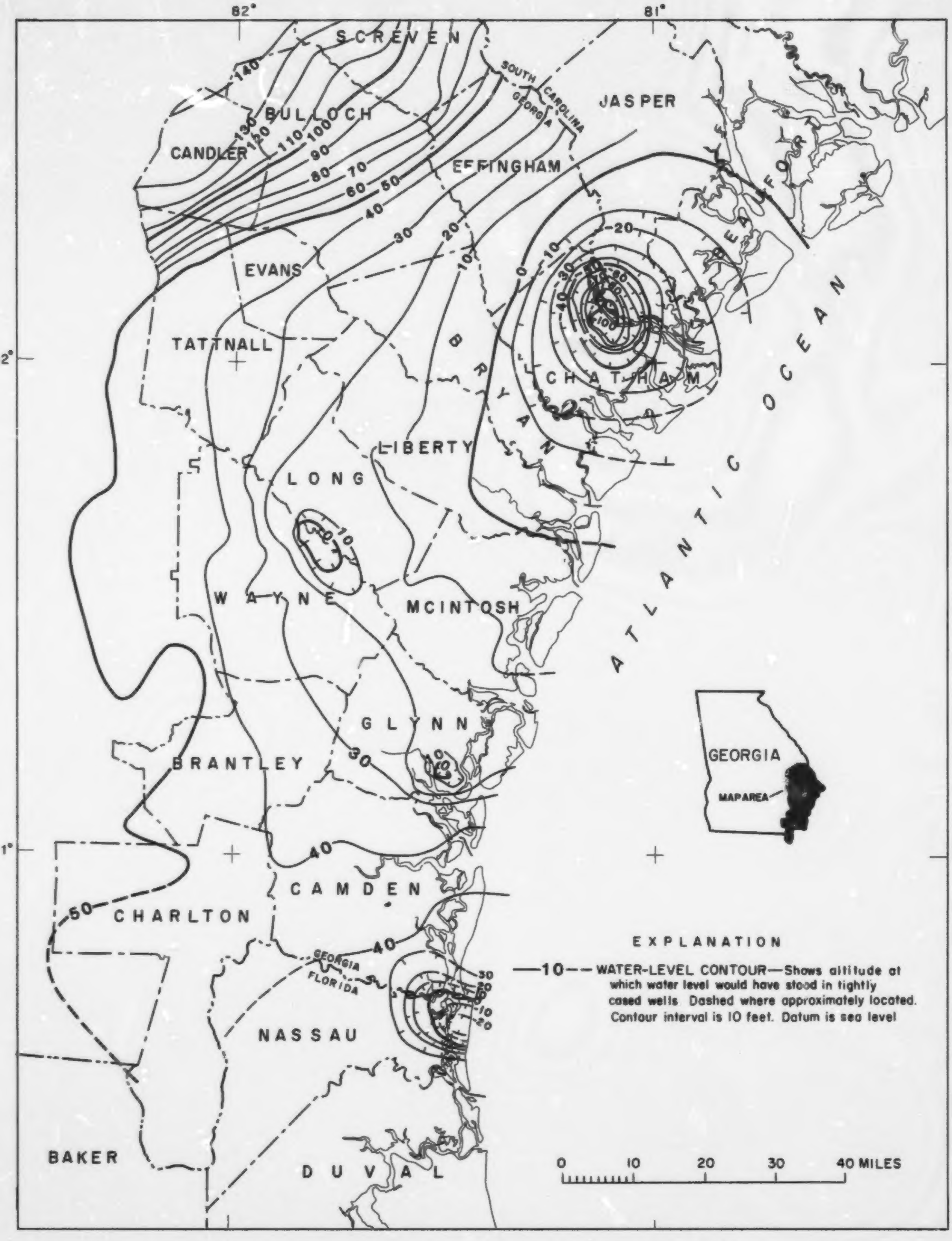
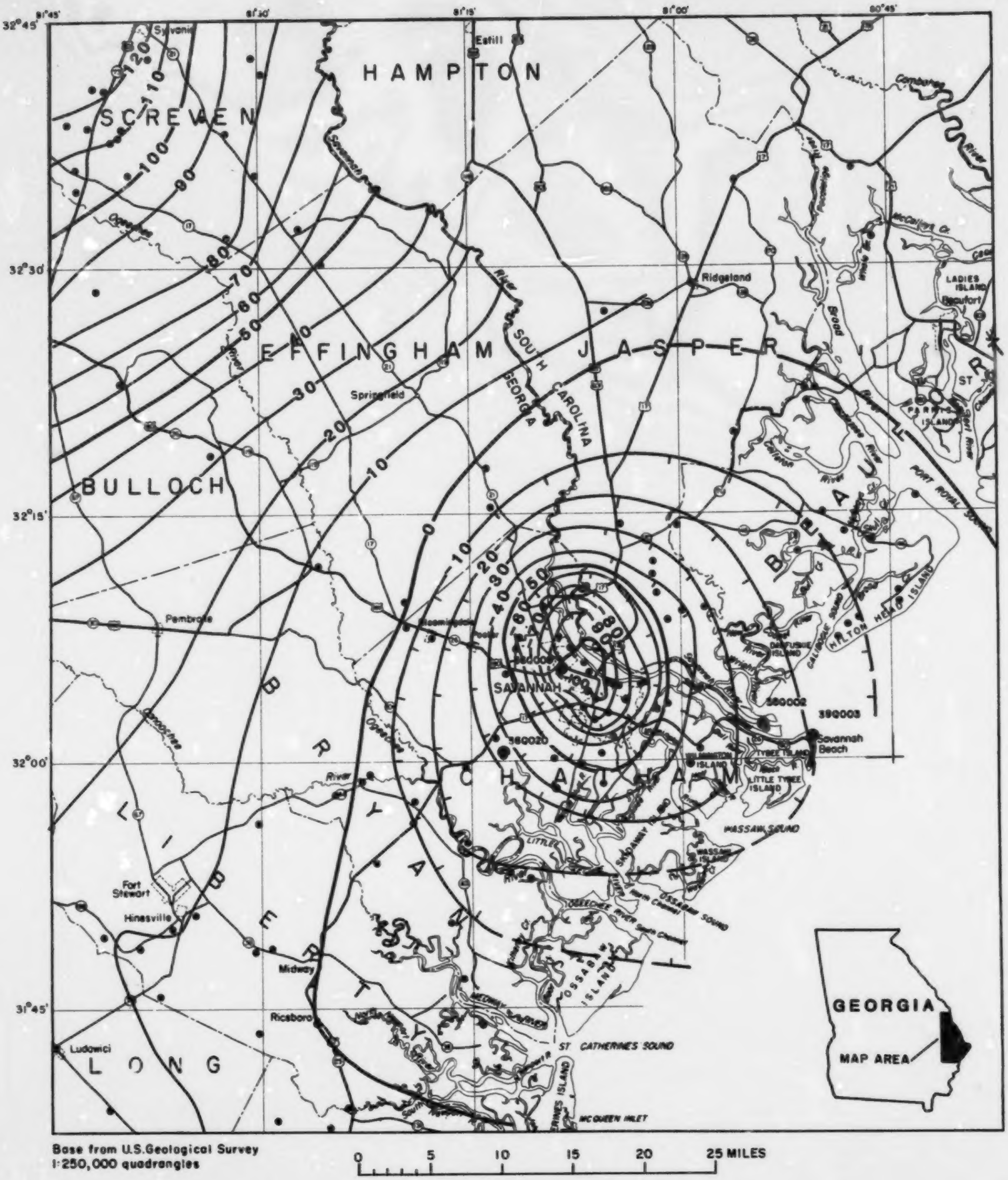

82°
81°
32°
31°
SCREVEN
SOUTH CAROLINA
GEORGIA
JASPER
BULLOCH
CANDLER
EFFINGHAM
BEAUFORT
EVANS
TATTNALL
BRYAN
CHATHAM
LIBERTY
LONG
WAYNE
MCINTOSH
ATLANTIC OCEAN
GLYNN
BRANTLEY
CAMDEN
CHARLTON
GEORGIA
FLORIDA
NASSAU
BAKER
DUVAL
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-100
-10
30
40
40
50
30
20
10
0
-10
-20
GEORGIA
MAP AREA
EXPLANATION
—10— — WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Contour interval is 10 feet. Datum is sea level
0
10
20
30
40 MILES

Figure 2.7.4-1.— Water level in the Floridan aquifer system in the coastal area, November 1983.

2.7.4.1 Savannah area

Ground-water levels in the Floridan aquifer system in the Savannah area are affected by changes in municipal and industrial pumping. During 1982, water levels recovered somewhat from the record lows of 1980-81 due to reductions in industrial pumping. This rising trend continued into 1983. The effects of partial industrial shutdowns are illustrated by the 1983 hydrographs for observation well 36Q008 (Layne-Atlantic) near the center of pumping. Seasonal changes in water level are shown for observation well 36Q020 (Morrison) 8 miles southwest of the pumping center.

Mean annual water levels in the Savannah area were from 1.1 feet lower to 1 foot higher in 1983 than in 1982.


32°45'
32°30'
32°15'
32°00'
31°45'
81°45'
81°30'
81°15'
81°00'
80°45'
HAMPTON
SCREVEN
EFFINGHAM
JASPER
BULLOCH
BRYAN
CHATHAM
LIBERTY
LONG
BEAUFORT
SOUTH CAROLINA
GEORGIA
Sylvania
Estill
Ridgeland
Springfield
Pembroke
SAVANNAH
Savannah Beach
Fort Stewart
Hinesville
Midway
Riceboro
Ludowici
LADIES ISLAND
Beaufort
HILTON HEAD ISLAND
PORT ROYAL SOUND
TYBEE ISLAND
LITTLE TYBEE ISLAND
WILMINGTON ISLAND
WASSAW SOUND
OSSABAW SOUND
OSSABAW ISLAND
ST CATHERINES SOUND
ST CATHERINES ISLAND
McQUEEN INLET
380002
380003
380020
120
110
100
90
80
70
60
50
40
30
20
10
0
GEORGIA
MAP AREA
0
5
10
15
20
25 MILES

Base from U.S.Geological Survey 1:250,000 quadrangles

EXPLANATION

—10— WATER-LEVEL CONTOUR--Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Contour interval is 10 feet. Datum is sea level

380002 ● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPH IS INCLUDED IN THIS REPORT

• DATA POINT

Figure 2.7.4.1-1.—Observation well locations and the water level in the Floridan aquifer system in the Savannah area, November 1983.

320530081085001 Local number, 36Q008.

LOCATION.--Lat 32°05'30", long 81°08'50", Hydrologic Unit 03060204, 0.19 mi southeast of intersection of Alfred Street and U.S. Highway 80.
Owner: Layne-Atlantic Co.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused industrial well, diameter 4 in., depth 406 ft, cased to 250 ft, open hole.

DATUM.--Altitude of land-surface datum is 9.91 ft.
Measuring point: Top of 3 in. casing, 1.0 ft above land-surface datum.

REMARKS.--Water levels for periods of missing recorder record, February 7-10, 16-22, August 25, September 1-30, November 25-28, and December 24-31, were estimated.

PERIOD OF RECORD.--February 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.17 ft below land-surface datum, July 11, 1954; lowest, 124.40 ft below land-surface datum, August 30, 1980.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	88.90	96.60	95.60	102.80	101.37	105.60	109.85	101.90	112.43	110.80	110.32	108.28
2	89.10	95.25	96.06	101.64	97.64	106.50	108.55	100.10	111.84	111.30	110.34	109.71
3	90.00	96.30	96.46	101.30	95.04	106.55	105.07	99.50	111.59	109.95	111.08	108.36
4	91.60	96.12	96.66	102.30	92.80	106.75	99.70	99.68	110.98	111.25	111.36	107.00
5	92.70	95.10	96.84	103.68	91.51	105.45	96.71	99.96	112.63	111.80	110.21	106.96
6	93.30	93.70	95.06	104.20	90.50	106.14	96.28	101.34	111.08	112.21	108.54	108.58
7	93.70	93.54	94.12	104.50	89.31	107.15	94.62	102.08	111.43	112.85	109.16	109.30
8	94.70	93.88	96.05	104.24	87.89	107.05	93.24	104.30	111.66	111.25	110.84	109.62
9	93.70	92.72	96.35	103.50	88.80	107.04	91.47	106.02	112.47	109.05	111.17	109.83
10	93.90	89.56	96.87	102.20	92.66	107.27	89.39	106.30	112.86	111.85	110.88	109.61
11	94.70	88.40	97.50	102.05	95.54	107.05	88.75	106.63	112.77	110.98	111.16	108.58
12	95.50	89.60	97.70	103.80	97.30	105.70	92.00	106.15	112.48	111.43	110.69	108.16
13	95.70	90.60	97.10	104.00	98.77	105.81	96.04	105.27	112.07	111.79	109.50	108.78
14	95.60	90.67	97.96	104.40	99.74	106.95	97.85	104.62	110.46	111.86	109.80	108.98
15	95.60	91.50	98.90	104.35	99.05	107.42	99.92	106.13	110.11	111.34	110.18	109.30
16	96.00	92.16	99.16	103.90	99.20	108.77	100.05	108.06	110.32	110.40	110.06	110.10
17	96.40	92.88	98.95	102.76	101.30	109.30	99.98	108.57	110.57	110.84	110.20	109.59
18	97.00	93.74	98.43	102.70	101.60	108.85	101.42	108.40	110.70	111.71	110.42	109.02
19	97.70	94.60	98.73	104.00	101.32	107.36	103.20	108.67	110.61	112.03	109.79	108.35
20	98.30	97.20	98.95	104.10	101.63	108.21	103.42	108.92	110.70	111.47	109.23	109.00
21	98.00	97.80	100.55	104.35	101.52	108.96	105.08	107.57	109.93	111.35	109.16	108.64
22	98.10	96.40	102.00	104.60	101.08	109.47	105.91	108.37	109.96	110.25	109.99	109.18
23	98.00	95.50	103.10	102.10	101.40	109.07	104.55	110.35	110.27	108.66	109.80	107.45
24	98.10	95.55	103.20	100.76	102.36	108.87	102.38	111.33	109.96	108.82	108.04	106.17
25	98.40	95.76	102.80	102.16	103.10	107.88	103.61	111.72	109.51	110.54	108.00	103.59
26	98.40	96.00	102.40	104.65	103.50	106.88	105.57	112.10	109.38	110.73	107.92	100.31
27	98.20	95.60	101.35	104.90	103.80	107.39	106.10	112.30	110.11	111.34	107.60	99.53
28	99.10	95.25	101.30	105.40	104.10	108.90	106.25	112.50	110.48	111.56	107.31	98.54
29	98.10	---	102.65	105.70	104.15	109.22	106.60	112.70	110.35	109.72	107.29	99.56
30	97.20	---	102.25	104.80	104.20	109.42	105.35	112.60	110.58	107.82	107.88	100.58
31	96.40	---	102.75	---	104.80	---	103.38	112.66	---	108.40	---	101.60
MEAN	95.55	94.00	98.96	103.53	98.61	107.57	100.72	106.99	111.01	110.82	109.60	106.85

CAL YR 1983 MEAN 103.72 HIGH 87.89 LOW 112.86

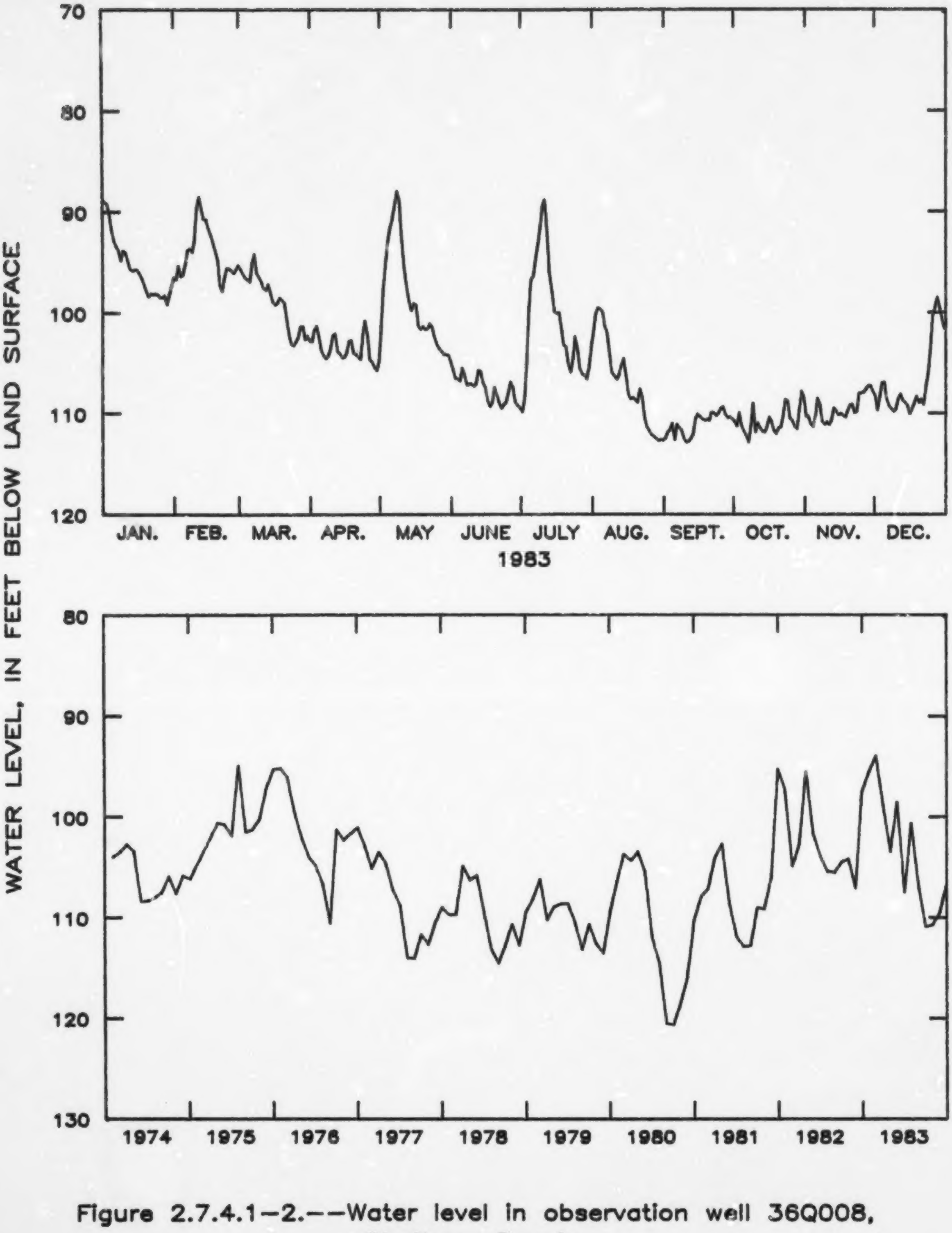


Figure 2.7.4.1-2.--Water level in observation well 36Q008, Chatham County.

36Q020 MORRISON CHATHAM COUNTY

320021081124801 Local number, 36Q020.

LOCATION.--Lat 32°00'18", long 81°12'48", Hydrologic Unit 03060204, 2.7 mi south of intersection of U.S. Highway 17 with Dean Forest Road.

Owner: H. J. Morrison.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 3 in., depth 365 ft, cased to 330 ft, open hole.

DATUM.--Altitude of land-surface datum is 13 ft.

Measuring point: Floor of recorder shelter, 3.88 ft above land-surface datum.

REMARKS.--Water levels for period of missing recorder record, June 7 to July 5, were estimated.

PERIOD OF RECORD.--March 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.66 ft below land-surface datum, June 28, 1958; lowest, 49.15 ft below land-surface datum, September 6 and 7, 1980.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	41.43	40.45	39.70	40.95	41.50	42.50	44.82	44.79	45.70	46.01	46.37	44.84
2	41.17	40.30	39.85	40.40	41.55	42.83	44.77	44.73	45.66	46.04	46.35	44.77
3	41.13	40.45	40.00	40.50	41.50	42.98	44.90	44.65	45.82	46.04	46.26	44.58
4	41.17	40.75	40.00	40.70	41.40	43.20	44.99	44.58	45.91	46.00	46.14	44.50
5	41.05	40.75	40.00	40.75	41.40	43.43	44.95	44.62	45.95	45.99	46.08	44.59
6	41.00	40.50	39.95	40.80	41.40	43.60	44.90	44.61	45.96	46.04	46.17	44.44
7	40.94	40.55	39.95	40.80	41.40	43.63	44.88	44.61	45.97	46.15	46.15	44.67
8	40.90	40.65	39.85	40.75	41.25	43.66	44.76	44.61	45.99	46.17	45.94	44.67
9	40.80	40.60	39.90	40.80	41.20	43.69	44.60	44.61	46.04	46.26	45.78	44.72
10	40.80	40.35	39.95	40.85	41.18	43.73	44.53	44.67	46.14	46.28	45.62	44.70
11	40.70	40.30	40.00	40.85	41.10	43.88	44.54	44.69	46.19	46.24	45.64	44.50
12	40.85	40.40	40.00	40.85	41.05	44.00	44.51	44.73	46.20	46.24	45.70	44.26
13	40.85	40.10	40.00	40.90	41.05	44.05	44.42	44.73	46.18	46.30	45.64	44.23
14	40.85	39.90	40.00	40.85	41.15	44.06	44.36	44.74	46.19	46.40	45.64	44.22
15	40.65	40.05	39.90	40.90	41.20	44.11	44.31	44.75	46.22	46.38	45.56	44.36
16	40.70	39.85	39.70	40.85	41.15	44.12	44.31	44.74	46.20	46.38	45.56	44.52
17	40.70	39.70	39.45	40.95	41.32	44.14	44.48	44.73	46.27	46.40	45.60	44.51
18	40.80	39.70	39.50	40.85	41.40	44.25	44.63	44.80	46.35	46.39	45.59	44.45
19	40.95	39.70	39.80	40.85	41.35	44.31	44.78	44.91	46.38	46.39	45.49	44.25
20	40.80	39.90	39.85	40.93	41.38	44.35	44.84	44.99	46.33	46.39	45.21	44.26
21	40.55	39.90	39.80	41.10	41.40	44.37	44.87	45.18	46.22	46.42	45.22	44.27
22	40.70	39.70	40.30	41.10	41.33	44.41	44.93	45.33	46.25	46.38	45.23	44.14
23	40.65	39.55	40.35	40.80	41.35	44.43	44.95	45.50	46.26	46.18	45.13	44.10
24	40.75	39.60	40.20	40.89	41.45	44.42	44.95	45.73	46.28	46.12	44.99	44.18
25	40.75	39.85	40.50	41.15	41.50	44.53	44.94	45.89	46.22	46.16	45.07	44.37
26	40.75	40.15	40.60	41.20	41.60	44.51	44.85	45.90	46.10	46.20	45.11	44.57
27	40.65	40.00	40.45	41.25	41.75	44.60	44.79	45.86	46.02	46.32	44.91	44.78
28	40.65	39.70	40.50	41.30	41.90	44.75	44.86	45.75	45.96	46.38	44.74	44.79
29	40.65	---	40.60	41.35	42.00	44.80	44.83	45.72	45.96	46.35	44.84	44.92
30	40.55	---	40.50	41.40	42.05	44.76	44.81	45.69	45.94	46.41	44.88	45.32
31	40.55	---	40.40	---	42.20	---	44.79	45.68	---	46.40	---	45.44
MEAN	40.82	40.12	40.05	40.92	41.43	44.00	44.74	45.05	46.10	46.25	45.55	44.55

CAL YR 1983 MEAN 43.32 HIGH 39.45 LOW 46.42

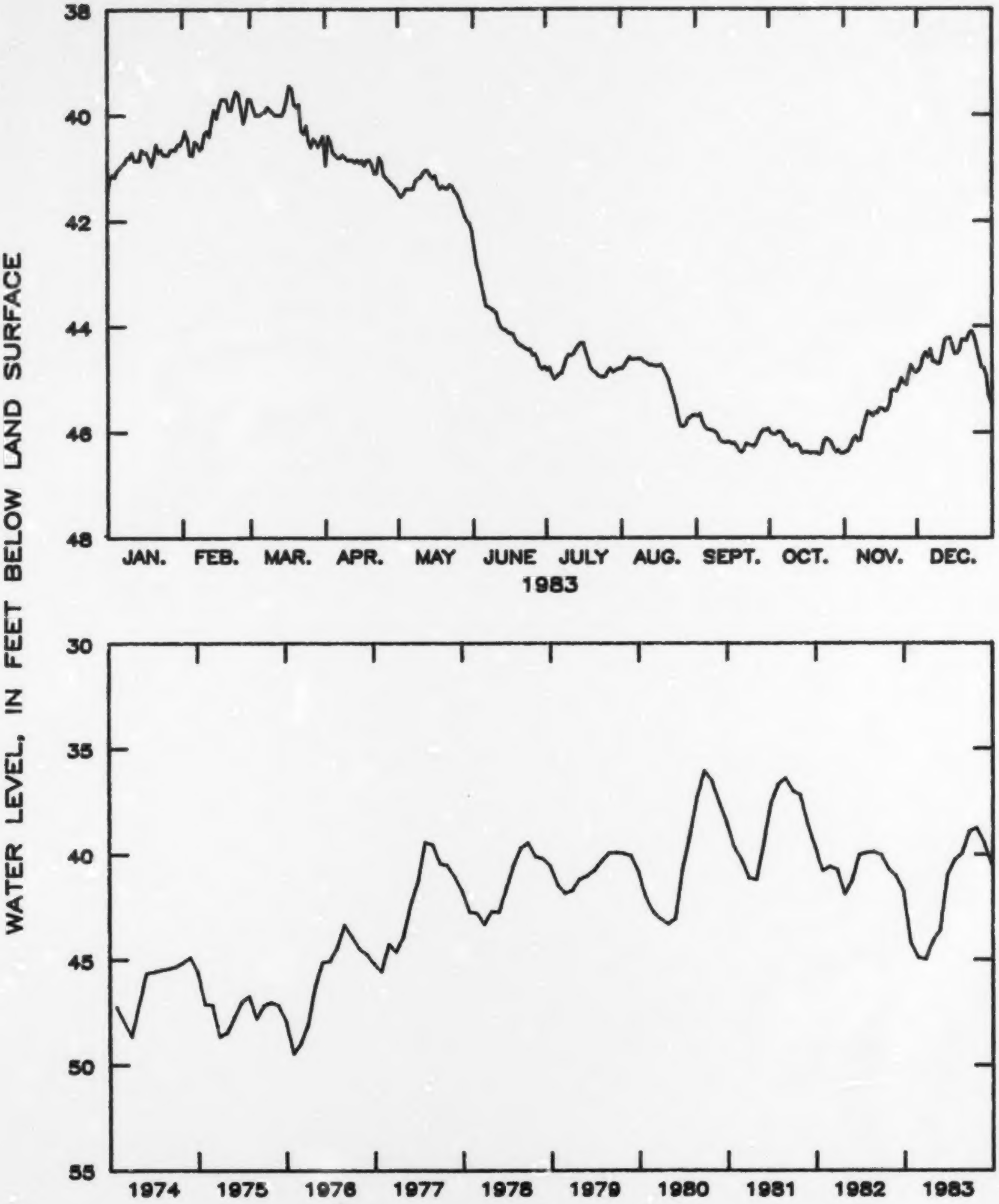


Figure 2.7.4.1–3.——Water level in observation well 36Q020, Chatham County.

38Q002 PILOT HOUSE CHATHAM COUNTY

320202080541201 Local number, 38Q002.

LOCATION.--Lat 32°02'02", long 80°54'12", Hydrologic Unit 03060204, Cockspur Island, near pilot house.
Owner: U.S. Department of the Interior, National Park Service.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 348 ft, cased to 110 ft, open hole.

DATUM.--Altitude of land-surface datum is 8.0 ft.
Measuring point: Floor of recorder shelter, 3.62 ft above land-surface datum.

REMARKS.--Borehole geophysical survey conducted June 16, 1961. Water levels for periods of missing recorder record, July 4-6 and November 25, were estimated.

PERIOD OF RECORD.--February 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.0 ft below land-surface datum, March 5, 1956; lowest, 35.60 ft below land-surface datum, September 2-6, 1980.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	30.60	29.30	28.70	28.70	29.60	30.33	32.17	32.90	32.79	32.56	32.79	32.37
2	30.50	29.20	28.90	28.65	29.60	30.45	32.27	32.90	32.69	32.75	32.82	32.22
3	30.35	29.55	29.00	29.00	29.60	30.50	32.43	32.80	32.77	32.83	32.74	32.09
4	30.40	29.90	29.00	29.00	29.70	30.62	32.34	32.70	32.86	32.76	32.68	32.08
5	30.40	29.65	28.90	28.90	29.65	30.75	32.24	32.71	32.75	32.73	32.45	32.15
6	30.50	29.30	28.90	29.00	29.80	30.76	32.14	32.62	32.77	32.81	32.57	31.93
7	30.40	29.50	28.90	29.10	29.85	30.70	32.05	32.52	32.82	32.74	32.58	32.43
8	30.30	29.60	28.80	28.90	29.75	30.67	31.92	32.50	32.86	32.57	32.22	32.28
9	29.95	29.45	28.80	28.90	29.70	30.41	32.00	32.52	32.93	32.76	32.24	32.29
10	30.00	29.30	28.85	29.10	29.70	30.53	32.05	32.60	32.94	32.69	32.33	32.32
11	30.05	29.20	28.85	29.00	29.75	30.47	32.19	32.84	33.04	32.55	32.58	32.00
12	30.40	29.50	28.90	28.90	29.75	30.60	32.23	33.01	33.12	32.78	32.54	31.78
13	30.20	29.10	28.80	28.85	29.70	30.80	32.35	32.85	33.14	32.90	32.50	31.92
14	30.10	29.20	28.80	28.90	29.85	30.97	32.45	32.65	33.17	33.00	32.50	31.90
15	30.10	29.20	28.65	28.95	29.80	30.95	32.50	32.69	32.84	32.99	32.57	32.10
16	30.05	29.05	28.30	29.00	29.90	31.05	32.48	32.58	32.73	32.88	32.77	32.26
17	30.00	28.95	28.05	28.90	29.70	31.19	32.50	32.61	32.86	32.95	32.73	32.15
18	30.00	29.10	28.35	28.95	29.70	31.32	32.62	32.62	32.97	32.94	32.52	31.90
19	30.20	29.10	28.80	28.90	29.80	30.45	32.80	32.75	32.97	32.84	32.52	31.63
20	29.70	29.15	28.50	29.00	29.90	31.52	32.98	32.76	32.90	32.74	32.52	31.61
21	29.40	29.10	28.60	29.20	30.00	31.60	33.00	32.77	32.95	32.77	32.48	31.52
22	29.60	28.95	29.20	29.15	29.95	31.56	32.98	32.88	32.99	32.57	32.46	31.59
23	29.80	29.00	29.00	28.80	30.06	31.57	32.95	33.10	32.92	32.46	32.28	31.62
24	29.80	28.90	28.75	29.10	29.80	31.69	32.85	33.16	32.90	32.62	32.16	31.99
25	29.85	28.90	28.80	29.20	29.83	31.71	32.90	33.17	32.83	32.69	32.21	31.92
26	29.80	28.90	28.80	29.20	29.87	31.81	32.75	33.11	32.67	32.57	32.26	31.90
27	29.70	28.80	28.65	29.30	30.00	31.95	32.65	33.10	32.63	32.66	32.09	31.88
28	29.65	28.50	28.90	29.35	29.96	32.10	32.70	33.08	32.54	32.84	32.12	31.82
29	29.80	---	28.90	29.50	30.02	32.11	32.78	33.03	32.38	33.05	32.45	31.86
30	29.60	---	28.70	29.50	30.14	32.10	32.80	32.95	32.41	32.81	32.46	32.01
31	29.60	---	28.60	---	30.22	---	32.88	32.84	---	32.86	---	32.01
MEAN	30.03	29.19	28.76	29.03	29.83	31.11	32.51	32.82	32.84	32.76	32.47	31.98

CAL YR 1983 MEAN 31.12 HIGH 28.05 LOW 33.17

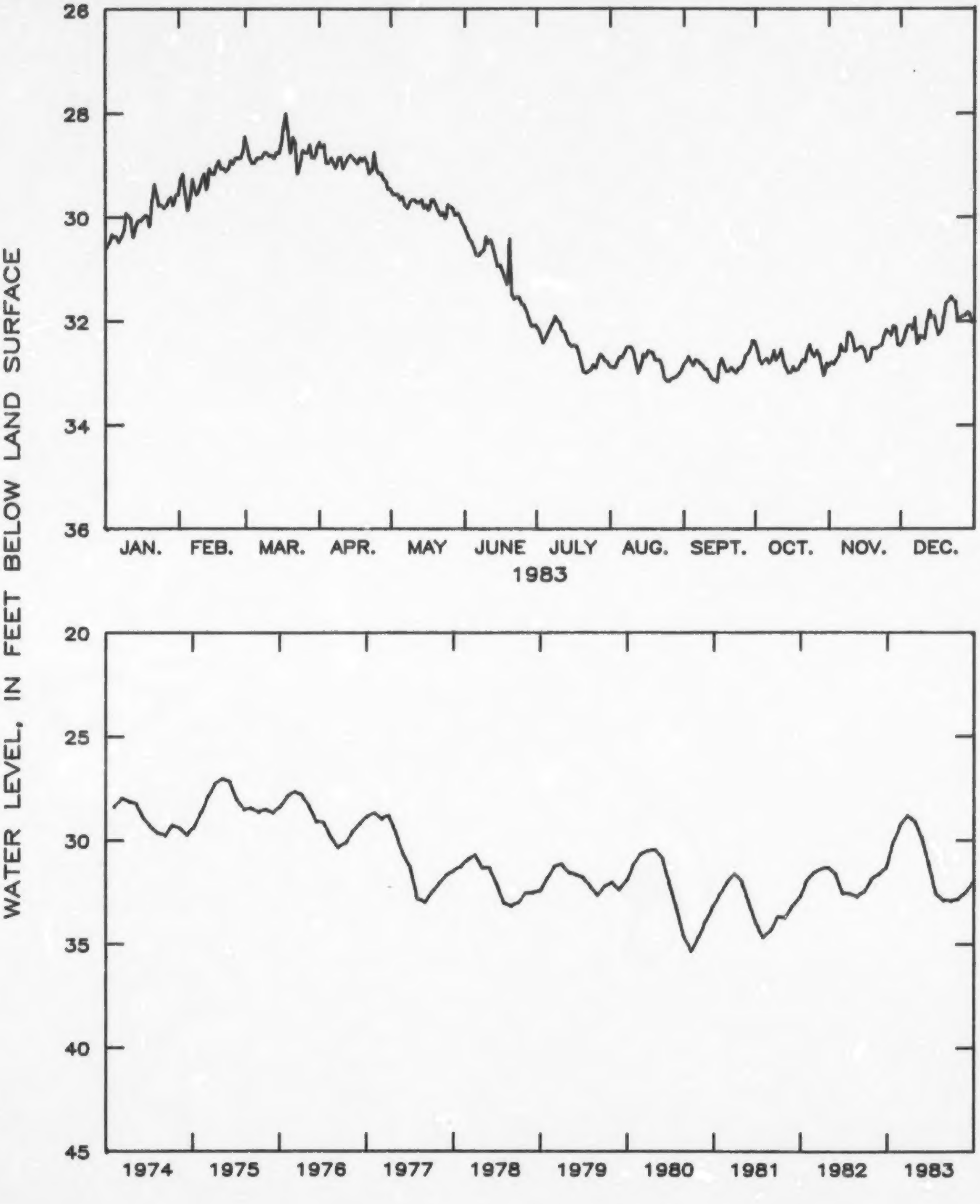


Figure 2.7.4.1–4.––Water level in observation well 38Q002, Chatham County.

39Q003 TEST WELL 7 CHATHAM COUNTY

320122080510202 Local number, 39Q003.

LOCATION.--Lat 32°01'22", long 80°51'02", Hydrologic Unit 03060204, Tybee Island near Fort Screven.

Owner: U.S. Geological Survey, test well 7.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled observation well, diameter 10 in., depth 600 ft, cased to 129 ft, open hole.

DATUM.--Altitude of land-surface datum is 7.0 ft.

Measuring point: Top of 10 in. casing, 2.0 ft above land-surface datum.

REMARKS.--Borehole geophysical survey conducted January 24, 1962. Water levels for period of missing recorder record, September 20-28, were estimated.

PERIOD OF RECORD.--May 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.8 ft below land-surface datum, April 11, 1963; lowest, 29.65 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	25.25	24.10	23.60	23.55	24.45	24.89	26.43	27.65	27.23	26.84	27.14	26.69
2	25.15	24.05	23.80	23.45	24.45	24.95	26.63	27.73	27.04	27.20	27.11	26.67
3	25.00	24.60	23.80	23.80	24.45	25.14	26.92	27.56	27.33	27.24	27.08	26.44
4	24.95	25.00	23.95	23.90	24.45	24.24	27.36	27.40	27.55	27.16	27.02	26.49
5	25.05	24.55	23.85	23.80	24.38	24.40	26.93	27.42	27.40	27.10	26.75	26.54
6	25.10	24.15	23.80	23.80	24.45	25.30	26.84	27.53	27.38	27.20	26.89	26.30
7	25.15	24.40	23.80	23.90	24.50	25.19	26.80	27.28	27.37	27.10	26.88	26.93
8	25.00	24.55	23.65	24.05	24.60	25.15	26.38	27.32	27.42	26.80	26.42	26.65
9	24.65	24.35	23.75	23.75	24.45	25.15	26.60	27.16	27.39	26.99	26.48	26.67
10	24.60	24.10	23.80	24.00	24.55	25.13	26.74	27.26	27.35	26.85	26.62	26.72
11	24.75	24.00	23.80	23.90	24.60	24.92	26.66	27.68	27.47	26.78	27.02	26.35
12	25.25	24.35	23.80	23.70	24.65	25.08	26.75	27.78	27.47	26.92	26.94	26.22
13	25.00	23.85	23.70	23.70	24.60	25.27	26.83	27.44	27.47	27.08	26.87	26.39
14	24.85	24.10	23.70	23.70	24.80	25.45	26.91	27.22	27.59	27.20	26.88	26.43
15	24.95	24.00	23.60	23.75	24.75	25.42	26.86	27.32	27.05	27.17	27.12	26.64
16	24.85	23.80	23.15	23.85	24.75	25.35	26.80	27.26	26.93	27.07	27.50	26.77
17	24.80	23.75	22.90	23.75	24.45	25.51	27.00	27.30	27.12	27.17	27.51	26.63
18	24.80	23.85	23.25	23.80	24.35	25.74	27.21	27.40	27.27	27.14	27.10	26.33
19	24.90	23.95	23.80	23.70	24.50	25.75	27.38	27.42	27.30	27.06	26.89	26.00
20	24.25	23.95	23.35	23.80	24.75	25.83	27.59	27.58	27.22	26.91	26.48	26.03
21	23.80	23.90	23.55	24.10	24.90	25.83	27.85	27.62	27.26	26.94	26.88	25.78
22	24.35	23.75	24.25	24.20	24.90	25.89	27.99	27.58	27.29	26.69	26.77	26.07
23	24.40	23.95	23.85	23.55	25.05	25.69	27.51	27.64	27.21	26.66	26.57	26.15
24	24.60	23.80	23.60	23.95	24.85	25.93	27.40	27.66	27.18	26.86	26.43	26.64
25	24.65	23.75	23.70	24.05	24.70	26.07	27.44	27.52	27.09	27.00	27.07	26.59
26	24.50	23.70	23.70	24.05	24.75	26.15	27.07	27.43	26.92	26.76	26.63	26.83
27	24.15	23.55	23.50	24.20	24.76	26.47	27.13	27.46	26.87	27.08	26.35	26.90
28	24.20	23.10	23.85	24.25	24.70	26.35	27.07	27.52	26.77	27.13	26.49	26.90
29	24.20	---	23.90	24.35	24.81	26.58	27.13	27.44	26.60	27.51	26.86	26.96
30	24.10	---	23.60	24.40	24.91	26.48	27.14	27.42	26.76	27.16	26.86	27.06
31	24.20	---	23.45	---	24.92	---	27.45	27.34	---	27.15	---	27.00
MEAN	24.69	24.03	23.67	23.89	24.65	25.51	27.06	27.46	27.21	27.03	26.85	26.54

CAL YR 1983 MEAN 25.73 HIGH 22.90 LOW 27.99

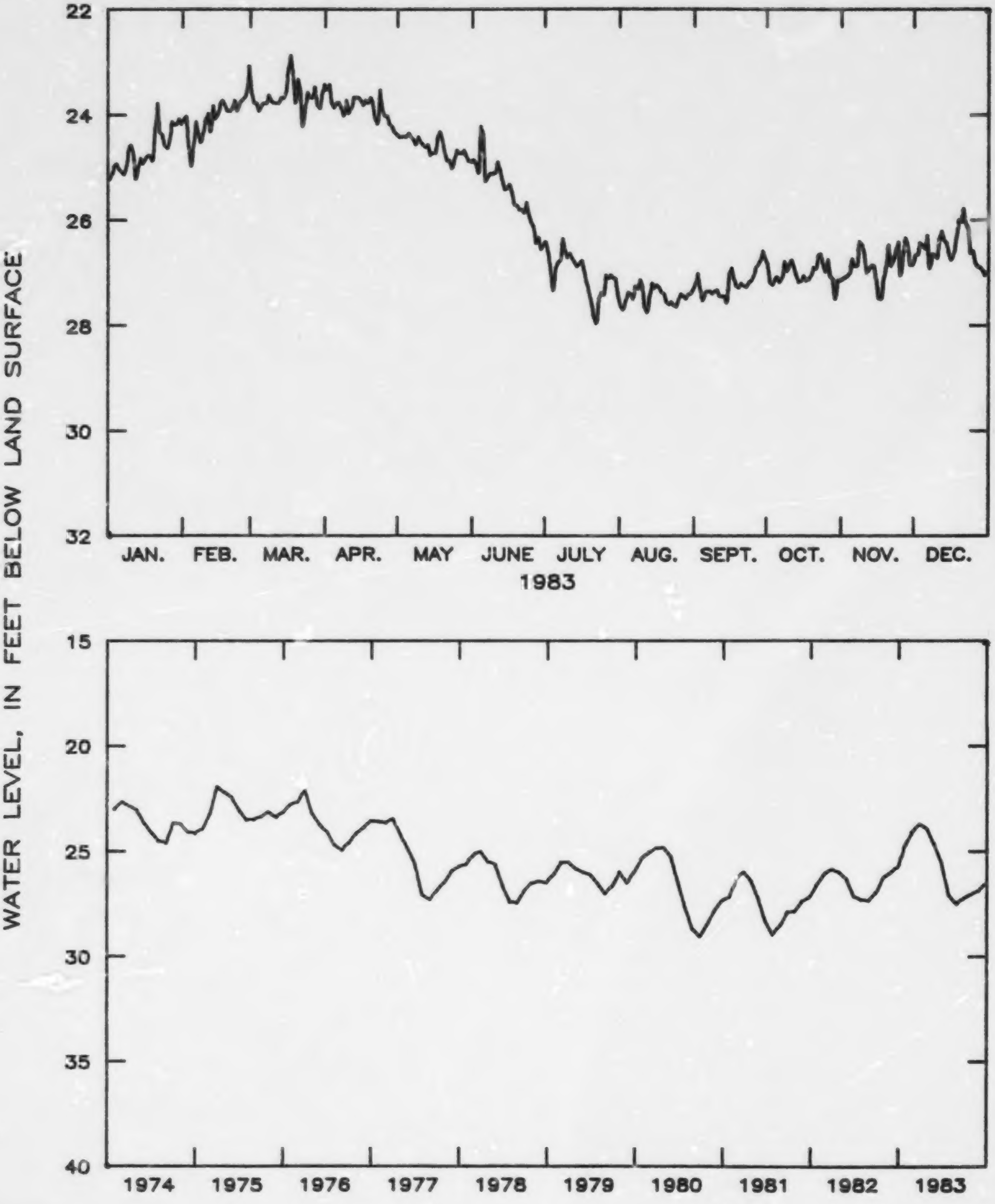
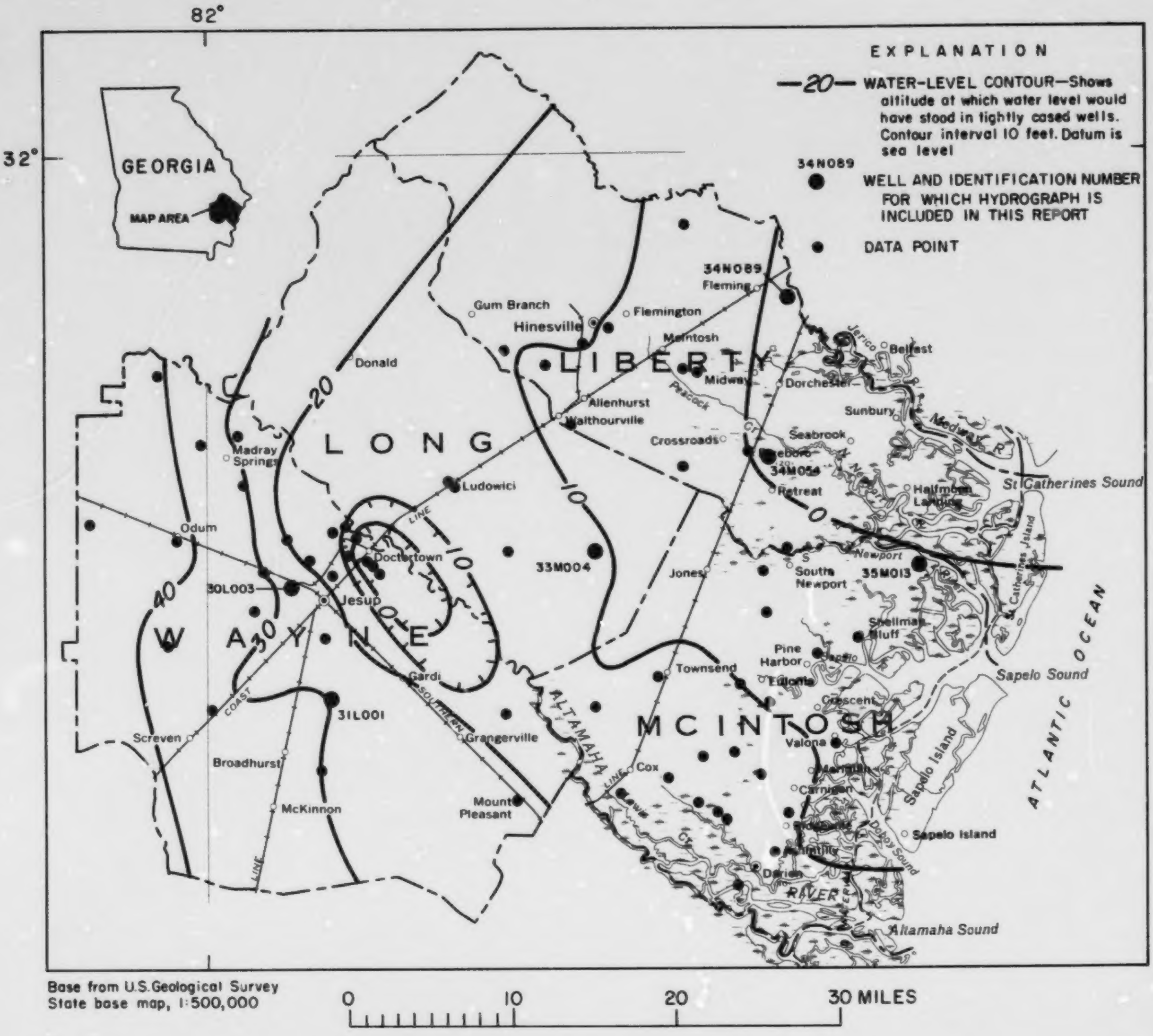


Figure 2.7.4.1–5.—Water level in observation well 39Q003, Chatham County.

2.7.4.2 Jesup-Riceboro area

Ground-water levels in the Floridan aquifer system are affected by industrial pumping of about 75 Mgal/d in the Jesup area and about 9 Mgal/d at Riceboro. Reductions in industrial pumping during 1982 allowed water levels to recover significantly from the record lows in 1981, a trend that continued into 1983. The 1983 hydrograph of well 34M054 illustrates the effects that partial industrial shutdowns have on water levels in these areas.

Mean annual water levels in the Jesup-Riceboro area were from 1.8 to 2.4 feet higher in 1983 than in 1982.


82°
32°
EXPLANATION
—20— WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Contour interval 10 feet. Datum is sea level
34N089 ● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPH IS INCLUDED IN THIS REPORT
● DATA POINT
GEORGIA
MAP AREA
LONG
LIBERTY
WAYNE
MCINTOSH
34N089
Fleming
Flemington
Gum Branch
Hinesville
McIntosh
Donald
Midway
Allenhurst
Walthourville
Peacock Cr
Crossroads
Jerico
Belfast
Dorchester
Sunbury
Medway R
Seabrook
Riceboro
34M054
Retreat
Halfmoon Landing
St Catherines Sound
St Catherines Island
Newport
South Newport
35M013
Madray Springs
Ludowici
Odum
Doctortown
33M004
Jones
30L003
Jesup
Shellman Bluff
Pine Harbor
Sapelo
Eulonia
Sapelo Sound
Townsend
Gardi
31L001
Crescent
Valona
Screven
Broadhurst
Grangerville
Cox
Meridian
Carnigan
Sapelo Island
McKinnon
Mount Pleasant
Lewis Cr
Ridgeville
Darien
Doboy Sound
RIVER
ALTAMAHA
Altamaha Sound
ATLANTIC OCEAN
COAST LINE
SOUTHERN LINE
LINE
40
30
20
10
0
0 10 20 30 MILES

Base from U.S.Geological Survey
State base map, 1:500,000

Figure 2.7.4.2-1.—Observation well locations and the water level in the Floridan aquifer system in the Jesup-Riceboro area, November 1983.

30L003 JOHNSON WAYNE COUNTY

313701081543501 Local number, 30L003.

LOCATION.--Lat 31°37'01", long 81°54'35", Hydrologic Unit 03070106, about 0.5 mi west of Jesup city limits near intersection of Highway 341 and Sunset Drive.

Owner: Homer Johnson.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 4 in., depth 584 ft, cased to 472 ft, open hole.

DATUM.--Altitude of land-surface datum is 107 ft.

Measuring point: Floor of recorder shelter, 2.88 ft above land-surface datum.

REMARKS.--Borehole geophysical survey conducted August 19, 1963. Water levels for period of missing recorder record, January 1-3, were estimated.

PERIOD OF RECORD.--January 1964 to March 1967. February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.98 ft below land-surface datum, April 19, 1964; lowest 85.27 ft below land-surface datum, June 29, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	70.93	75.83	77.35	77.02	77.44	77.46	76.02	76.75	79.16	77.04	78.93	79.59
2	70.82	75.58	77.46	77.04	77.46	77.34	76.20	76.85	79.24	77.11	79.04	79.50
3	70.80	75.59	77.52	77.10	77.43	77.10	76.30	76.97	79.39	77.14	79.05	79.38
4	71.03	75.88	77.52	77.34	77.44	76.83	76.28	77.01	79.45	77.14	78.90	79.23
5	71.51	76.00	77.44	77.36	77.30	76.56	76.24	77.04	78.68	77.11	78.80	79.15
6	72.16	75.86	77.54	77.36	77.16	76.37	76.03	77.02	77.38	77.14	78.80	79.04
7	72.76	76.04	77.76	77.39	77.34	76.18	76.00	76.94	76.25	77.14	78.85	79.26
8	73.16	76.38	77.82	77.31	77.41	76.09	76.13	76.94	75.43	77.14	78.79	79.45
9	73.42	76.56	77.88	77.19	77.53	76.16	76.12	77.26	74.84	77.16	78.76	79.53
10	73.70	76.56	77.78	77.14	77.69	76.24	76.04	77.63	74.37	77.13	78.67	79.51
11	73.93	76.50	77.60	77.10	77.69	76.28	76.12	77.80	73.82	77.01	78.66	79.28
12	74.26	76.90	77.80	77.28	77.58	76.18	76.16	77.81	73.58	76.89	78.77	79.04
13	74.58	76.98	77.94	77.44	77.54	76.06	76.18	77.84	73.85	76.88	78.85	79.04
14	74.68	76.91	78.00	77.46	77.56	76.02	76.18	77.99	74.65	77.02	78.95	78.57
15	74.69	77.24	77.88	77.34	77.70	75.92	76.15	78.16	75.25	76.70	79.03	78.78
16	74.80	77.34	77.69	77.24	77.67	75.86	76.22	78.32	75.64	76.63	79.03	78.96
17	74.92	77.33	77.42	77.28	77.79	75.80	76.36	78.56	76.00	76.87	79.17	79.01
18	75.18	77.40	77.36	77.15	77.99	75.75	76.47	78.51	76.32	77.24	79.24	78.97
19	75.36	77.42	77.50	77.15	77.86	75.70	76.60	78.65	76.53	77.85	79.19	78.89
20	75.30	77.58	77.34	77.19	77.73	75.66	76.69	78.66	76.50	77.81	79.08	78.99
21	75.13	77.45	77.10	77.11	77.72	75.61	76.76	78.59	76.33	77.91	79.16	79.05
22	75.34	77.02	76.84	77.06	77.73	75.70	76.74	78.43	76.37	78.05	79.30	78.90
23	75.61	76.99	76.54	76.77	77.76	75.83	76.62	78.62	76.67	78.15	79.25	78.03
24	75.98	77.20	76.20	76.70	77.82	75.92	76.56	78.85	76.80	78.25	79.14	76.77
25	76.08	77.32	76.13	76.98	77.86	75.90	76.58	78.92	76.85	78.38	79.33	75.91
26	76.10	77.52	75.16	77.16	77.90	75.97	76.58	78.92	76.95	78.49	79.59	75.31
27	76.02	77.54	75.77	77.26	78.00	76.03	76.76	78.90	76.95	78.66	79.60	75.00
28	76.08	77.35	76.12	77.57	78.07	75.82	76.78	78.84	76.95	78.86	79.50	74.26
29	76.04	---	76.53	77.39	78.06	75.64	76.75	78.88	76.95	78.94	79.55	73.49
30	75.88	---	76.80	77.34	77.92	75.84	76.70	78.99	76.96	78.94	79.65	73.47
31	75.88	---	76.84	---	77.68	---	76.72	79.06	---	78.97	---	73.59
MEAN	74.26	76.80	77.21	77.21	77.67	76.13	76.39	78.06	76.47	77.60	79.09	77.97

CAL YR 1983 MEAN 77.07 HIGH 70.80 LOW 79.65

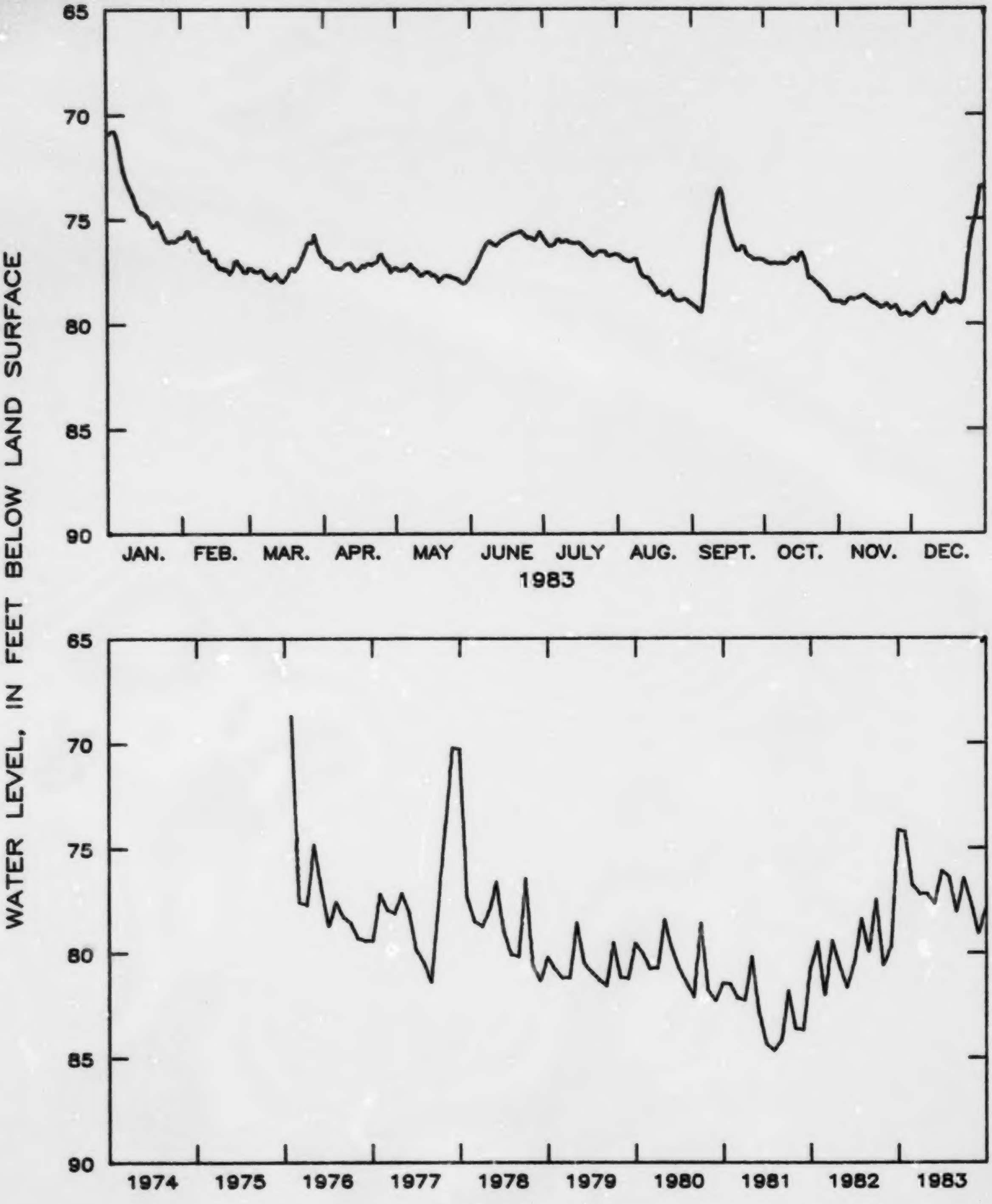


Figure 2.7.4.2-2.--Water level in observation well 30L003, Wayne County.

31L001 MEARS 2 WAYNE COUNTY

313055081521901 Local number, 31L001.

LOCATION.--Lat 31°31'02", long 81°52'22", Hydrologic Unit 03070106, about 6 mi south of Jesup near Penholoway Creek on Walker Creek.

Owner: Brunswick Pulp and Paper, Justice Mears 2.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused oil test well, diameter 6 in., depth 691 ft, cased to 587 ft, open hole.

DATUM.--Altitude of land-surface datum is 55 ft.

Measuring point: Top of 6 in. casing at land-surface datum.

REMARKS.--Well pumped and water quality sampled, August 2, 1978.

PERIOD OF RECORD.--February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.30 ft below land-surface datum, December 16, 1977; lowest, 29.23 ft below land-surface datum, June 29, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.48	21.02	21.98	21.60	21.84	22.28	21.26	22.01	23.67	22.38	23.76	24.25
2	17.32	20.85	22.13	21.58	21.83	22.24	21.36	22.04	23.72	22.41	23.75	24.16
3	17.25	20.94	22.19	21.66	21.76	22.14	21.46	22.07	23.84	22.46	23.72	24.01
4	17.43	21.18	22.16	21.86	21.74	21.96	21.46	22.11	23.99	22.43	23.59	23.92
5	17.80	21.25	22.14	21.92	21.81	21.79	21.42	22.16	23.60	22.40	23.57	23.94
6	18.19	21.07	22.10	21.90	21.76	21.66	21.33	22.13	22.63	22.45	23.62	23.82
7	18.57	21.18	22.08	21.91	21.81	21.52	21.38	22.07	21.93	22.52	23.63	24.02
8	18.88	21.41	22.02	21.84	21.82	21.46	21.46	22.06	21.60	22.50	23.56	24.14
9	19.10	21.54	22.11	21.76	21.87	21.50	21.40	22.23	21.10	22.51	23.52	24.21
10	19.30	21.70	22.12	21.77	22.04	21.58	21.34	22.45	20.69	22.44	23.43	24.19
11	19.46	21.51	22.10	21.72	22.08	21.56	21.42	22.59	20.31	22.40	23.49	23.94
12	19.75	21.79	22.15	21.82	22.01	21.48	21.46	22.62	19.93	22.27	23.59	23.75
13	20.05	21.72	22.28	21.89	21.98	21.42	21.49	22.64	20.03	22.28	23.59	23.71
14	20.12	21.66	22.32	21.88	21.97	21.39	21.48	22.76	20.46	22.39	23.70	23.52
15	20.11	21.91	22.28	21.78	22.01	21.30	21.52	22.89	20.97	22.27	23.67	23.72
16	20.20	21.96	22.12	21.75	21.92	21.28	21.58	22.99	21.31	22.19	23.75	23.87
17	20.27	21.94	21.92	21.75	22.05	21.30	21.62	23.10	21.54	22.26	23.89	23.90
18	20.48	22.06	21.91	21.62	22.26	21.24	21.71	23.18	21.76	22.41	23.95	23.83
19	20.19	22.12	22.07	21.62	22.31	21.20	21.80	23.26	21.97	22.06	23.89	23.76
20	20.64	22.26	21.97	21.70	22.22	21.19	21.90	23.31	22.02	22.77	23.69	23.85
21	20.46	22.24	21.89	21.68	22.20	21.15	21.94	23.25	21.85	22.64	23.86	23.85
22	20.60	21.94	21.90	21.63	22.16	21.17	21.92	23.27	21.99	22.94	23.95	23.73
23	20.68	21.78	21.70	21.33	22.22	21.24	21.82	23.34	22.17	22.91	23.89	23.29
24	20.96	21.88	21.34	21.22	22.26	21.25	21.78	23.52	22.27	23.05	23.76	22.59
25	21.12	22.04	21.39	21.46	22.33	21.20	21.79	23.54	22.29	23.19	23.97	22.04
26	21.16	22.24	21.35	21.62	22.33	21.29	21.80	23.55	22.28	23.28	24.18	21.56
27	21.07	22.22	21.16	21.71	22.45	21.37	21.90	23.55	22.36	23.44	24.09	21.01
28	21.20	21.99	21.20	21.77	22.56	21.27	22.02	23.47	22.32	23.60	23.99	20.36
29	21.22	---	21.93	21.83	22.52	21.15	22.02	23.48	22.30	23.65	24.14	19.95
30	21.12	---	21.32	21.82	22.46	21.21	21.99	23.54	22.33	23.71	24.24	20.01
31	21.13	---	21.50	---	22.30	---	21.98	23.62	---	23.74	---	20.00
MEAN	19.78	21.69	21.90	21.71	22.09	21.46	21.64	22.86	21.97	22.71	23.78	23.13

CAL YR 1983 MEAN 22.06 HIGH 17.25 LOW 24.25

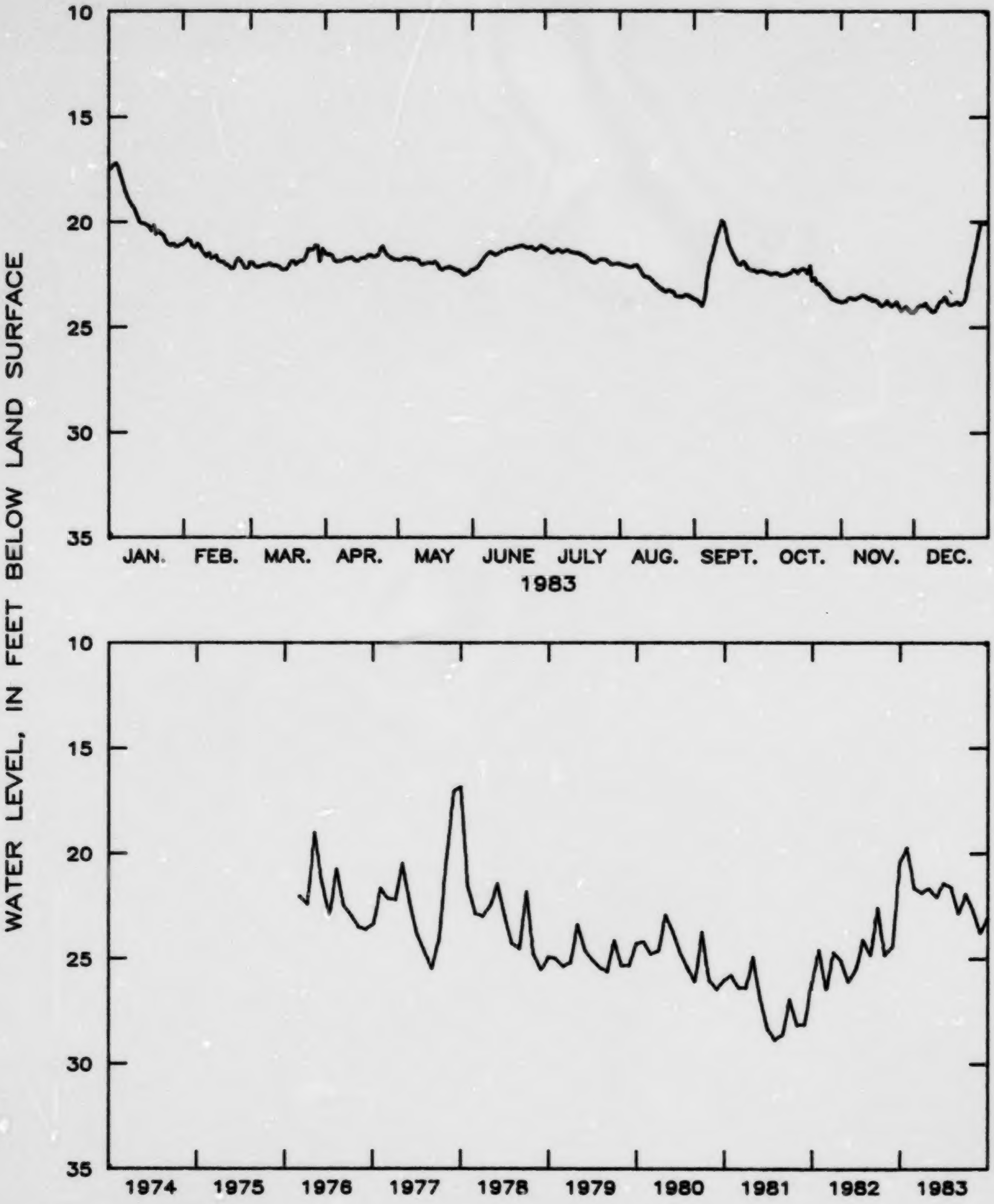


Figure 2.7.4.2-3.—-Water level in observation well 31L001, Wayne County.

33H004 TEST WELL 3 LONG COUNTY

313845081361701 Local number, 33H004.
LOCATION.--Lat 31°38'54", long 81°36'04", Hydrologic Unit 03070106, 9 mi southeast of Ludowici, at Hope Cemetery.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4-3 in, depth 872 ft, cased to 538 ft, open hole.
DATUM.--Altitude of land-surface datum is 61.2 ft.
Measuring point: Top of recorder shelter, 3.5 ft above land-surface datum.
REMARKS.--Well pumped and sounded June 17, 1976, to depth of 861 ft; water-quality sample collected. Borehole geophysical survey conducted July 28, 1976.
PERIOD OF RECORD.--January 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.04 ft below land-surface datum, January 14, 1968; lowest, 53.22 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	45.30	46.02	46.70	46.99	47.38	47.82	47.18	47.50	48.46	47.91	48.73	49.16
2	45.12	45.88	46.87	46.87	47.35	47.92	47.18	47.50	48.47	47.93	48.71	49.14
3	45.02	46.00	46.96	46.94	47.27	47.94	47.22	47.50	48.56	47.94	48.62	49.00
4	45.02	46.22	47.04	47.12	47.24	47.88	47.24	47.52	48.70	47.91	48.53	48.95
5	44.92	46.28	47.02	47.20	47.32	47.83	47.14	47.54	48.70	47.87	48.60	49.04
6	44.80	46.09	46.98	47.20	47.46	47.78	47.11	47.53	48.71	47.92	48.65	48.95
7	44.77	46.15	46.94	47.20	47.52	47.70	47.18	47.48	48.63	48.00	48.64	49.11
8	44.78	46.30	46.83	47.16	47.43	47.66	47.26	47.49	48.54	48.04	48.58	49.17
9	44.75	46.30	46.88	47.10	47.46	47.68	47.19	47.52	48.42	48.05	48.52	49.22
10	44.80	46.18	46.91	47.16	47.56	47.74	47.15	47.59	48.25	48.04	48.46	49.24
11	44.84	46.28	46.98	47.20	47.60	47.74	47.19	47.63	48.05	48.00	48.52	49.02
12	45.00	46.54	47.04	47.24	47.58	47.68	47.23	47.63	47.85	47.95	48.62	48.87
13	45.24	46.34	47.10	47.30	47.58	47.62	47.26	47.70	47.65	47.96	48.63	48.90
14	45.28	46.24	47.12	47.28	47.58	47.57	47.23	47.81	47.45	48.04	48.69	48.84
15	45.22	46.46	47.10	47.18	47.54	47.49	47.19	47.90	47.52	48.08	48.61	49.02
16	45.31	46.44	46.98	47.20	47.48	47.47	47.20	47.94	47.53	48.07	48.70	49.17
17	45.38	46.38	46.81	47.22	47.60	47.48	47.23	47.96	47.56	48.05	48.84	49.22
18	45.54	46.55	46.84	47.11	47.74	47.44	47.26	48.02	47.61	48.01	48.93	49.12
19	45.72	46.66	47.03	47.10	47.76	47.42	47.30	48.05	47.68	48.02	48.82	49.04
20	45.70	46.82	47.02	47.20	47.74	47.38	47.36	48.09	47.68	48.06	48.63	49.12
21	45.56	46.88	47.07	47.26	47.72	47.37	47.39	48.15	47.59	48.09	48.85	49.09
22	45.62	46.72	47.29	47.26	47.76	47.33	47.34	48.21	47.70	48.13	48.92	48.98
23	45.65	46.58	47.30	46.97	47.65	47.33	47.32	48.30	47.85	47.99	48.85	48.94
24	45.80	46.59	47.06	46.84	47.64	47.27	47.30	48.38	47.91	48.04	48.72	48.96
25	45.90	46.74	47.24	47.02	47.68	47.20	47.29	48.42	47.92	48.13	48.94	48.99
26	45.95	46.96	47.30	47.18	47.68	47.24	47.27	48.44	47.84	48.19	49.05	48.82
27	45.86	46.99	47.10	47.28	47.74	47.28	47.37	48.42	47.80	48.35	48.94	48.48
28	46.02	46.74	47.06	47.30	47.83	47.24	47.46	48.36	47.80	48.54	48.89	48.13
29	46.10	---	47.16	47.34	47.76	47.20	47.50	48.36	47.82	48.58	49.01	48.03
30	46.08	---	47.10	47.38	47.72	47.20	47.49	48.40	47.86	48.65	49.09	48.13
31	46.12	---	46.95	---	47.72	---	47.50	48.44	---	48.71	---	48.05
MEAN	45.39	46.44	47.03	47.16	47.58	47.53	47.28	47.93	48.00	48.10	48.74	48.90

CAL YR 1983 MEAN 47.51 HIGH 44.75 LOW 49.24

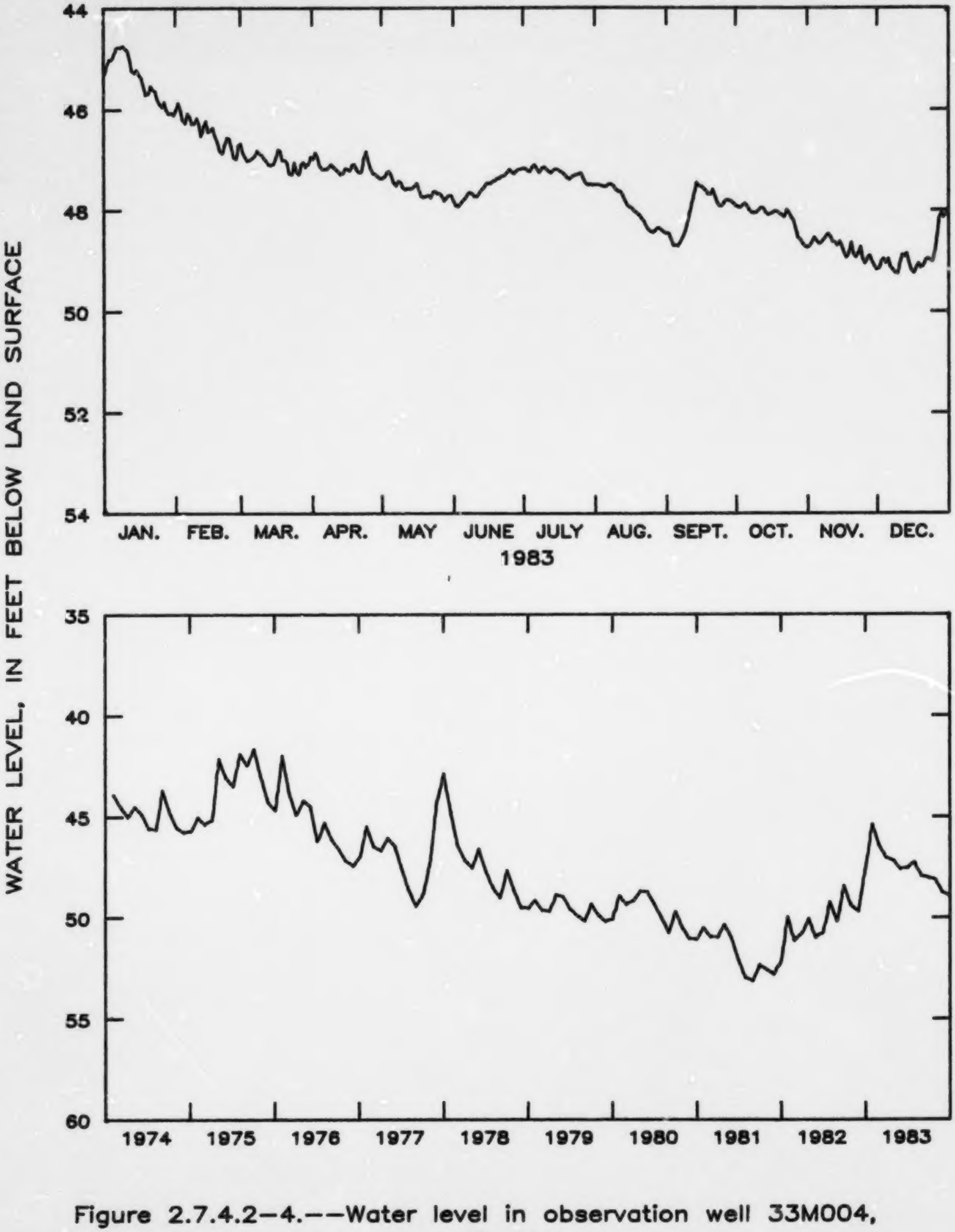


Figure 2.7.4.2-4.—–Water level in observation well 33M004, Long County.

34M054 TEST WELL 2 LIBERTY COUNTY

314343081251901 Local number, 34M054.
LOCATION.—Lat 31°43'43", long 81°25'19", Hydrologic Unit 03060204, Riceboro, Ga., near entrance to Interstate Paper Co.
Owner: U.S. Geological Survey, test well 2.
AQUIFER.—Floridan aquifer system.
WELL CHARACTERISTICS.—Drilled observation well, diameter 4 in., depth 802 ft, cased to 467 ft, open hole.
DATUM.—Altitude of land-surface datum is 19 ft.
Measuring point: Floor of recorder shelter, 3.4 ft above land-surface datum.
REMARKS.—Well pumped July 11, 1979; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 15, 1976. Water levels for periods of missing recorder record, January 1-3, August 6-8, and December 2-19, were estimated.
PERIOD OF RECORD.—February 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level, 0.85 ft below land-surface datum, February 5, 1967; lowest, 24.30 ft below land-surface datum, December 20, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	18.04	18.30	18.75	19.15	19.25	19.39	19.74	20.08	20.16	20.78	20.32	21.00
2	18.02	18.15	18.95	18.95	19.25	19.52	19.85	19.88	20.06	20.78	20.66	20.98
3	18.09	18.50	19.00	19.00	18.65	19.56	19.95	19.96	20.18	20.72	20.66	20.85
4	18.25	18.65	18.95	19.13	18.35	19.54	19.95	19.92	20.41	20.81	20.52	20.80
5	18.60	18.70	18.85	19.25	18.85	19.52	19.89	19.87	20.64	20.76	20.52	20.89
6	18.80	18.55	18.85	19.35	19.10	19.51	19.78	19.90	20.66	20.58	20.59	20.80
7	18.83	18.60	18.78	19.10	19.20	19.56	19.72	19.99	20.72	20.57	20.61	20.97
8	18.92	18.65	18.35	19.10	19.15	19.56	19.43	19.94	20.74	20.14	20.51	21.03
9	18.83	18.55	18.60	19.10	19.15	19.60	19.71	20.01	20.90	20.16	20.46	21.08
10	18.78	18.35	18.63	19.10	19.45	19.64	19.63	20.03	20.93	20.43	20.43	21.10
11	18.75	18.45	18.65	19.15	19.35	19.64	19.66	20.09	20.92	20.53	20.49	20.89
12	18.90	18.70	18.70	19.15	19.35	19.66	19.86	19.99	20.93	20.50	20.63	20.74
13	18.95	18.50	18.80	19.20	19.45	19.70	19.92	19.93	20.94	20.52	20.63	20.77
14	18.95	18.40	18.82	19.17	19.55	19.70	19.94	20.01	20.83	20.65	20.00	20.71
15	18.85	18.60	18.85	19.15	19.55	19.72	19.90	19.71	20.89	20.72	20.55	20.90
16	18.85	18.55	18.70	19.10	19.50	19.82	19.88	20.05	20.84	20.72	20.56	21.05
17	18.80	18.45	18.50	19.18	19.50	19.91	19.90	20.00	20.74	20.78	20.66	21.10
18	18.95	18.60	18.45	19.05	19.50	19.86	19.74	20.00	20.75	20.68	20.75	21.00
19	19.10	18.70	18.68	18.55	19.45	19.90	19.34	19.99	20.78	20.52	20.82	20.93
20	19.05	18.75	18.65	18.85	19.38	19.26	19.85	19.95	20.71	20.65	20.61	21.01
21	18.85	18.82	18.70	19.10	19.39	18.42	19.80	19.97	20.68	20.73	20.67	20.96
22	18.85	18.75	19.05	19.15	19.32	18.04	19.88	20.06	20.71	20.64	20.84	20.56
23	18.83	18.70	19.05	18.45	19.30	17.70	19.93	20.17	20.77	20.52	20.82	19.98
24	18.84	18.70	18.75	18.10	19.28	18.76	19.88	20.13	20.80	20.58	20.58	19.78
25	18.89	18.70	19.20	18.75	19.31	19.32	19.85	20.45	20.80	20.67	20.55	20.44
26	18.80	18.95	19.30	18.88	19.24	19.57	19.76	20.50	20.73	20.68	20.66	19.70
27	18.60	18.95	19.05	19.10	19.28	19.77	19.84	20.38	20.78	20.32	20.55	19.22
28	18.60	18.70	19.10	19.10	19.39	20.04	19.92	20.27	20.78	20.37	20.60	18.77
29	18.60	---	19.20	19.20	19.30	19.72	20.04	20.20	20.83	20.78	20.78	18.93
30	18.50	---	19.25	19.25	19.25	19.84	20.06	20.20	20.82	20.83	20.89	19.76
31	18.55	---	19.10	---	19.26	---	20.04	20.22	---	20.27	---	20.67
MEAN	18.71	18.61	18.85	19.03	19.27	19.46	19.83	20.06	20.71	20.59	20.60	20.56

CAL YR 1983 MEAN 19.70 HIGH 17.70 LOW 21.10

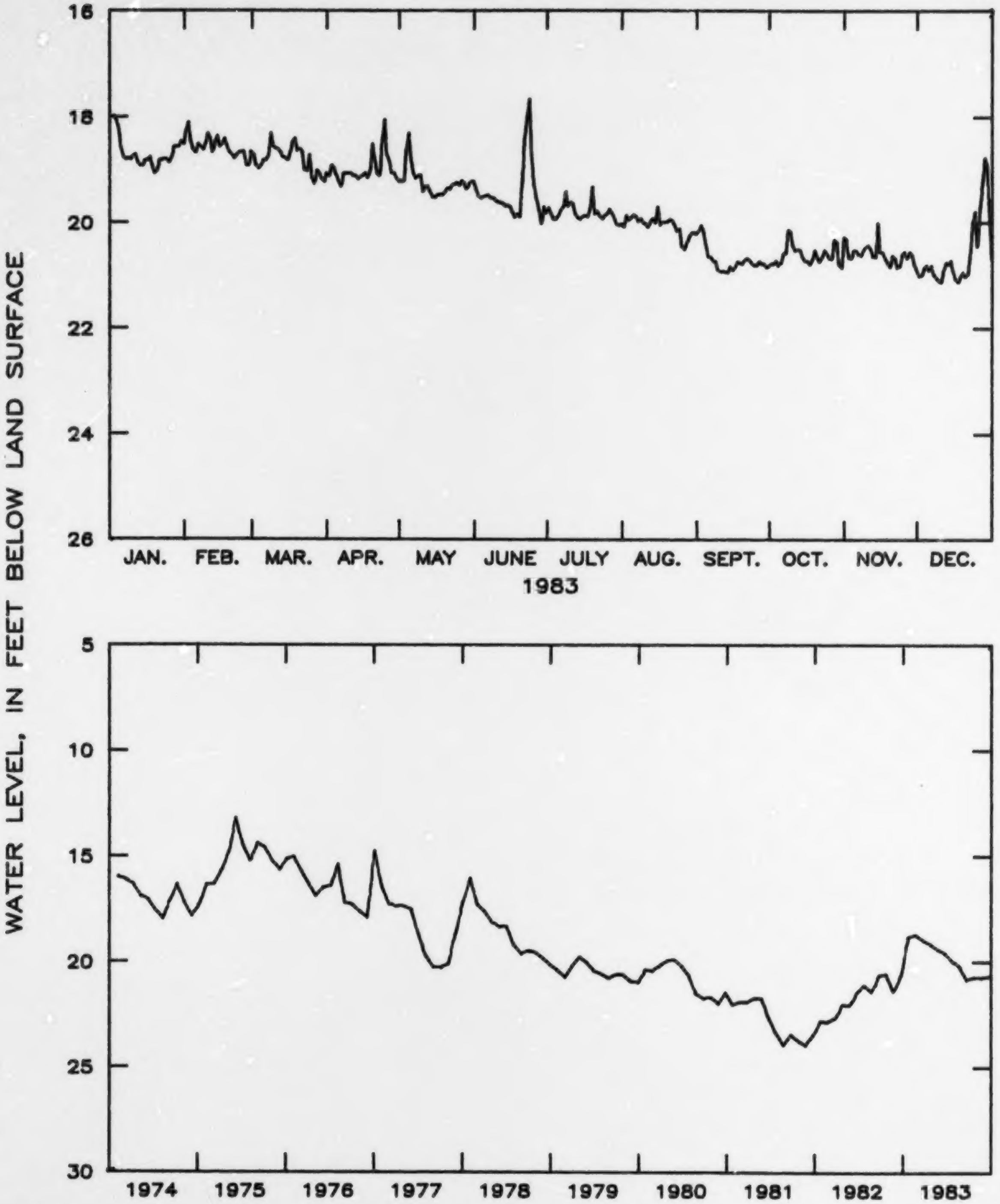


Figure 2.7.4.2-5.--Water level in observation well 34M054, Liberty County.

315214081235301 Local number, 34H089.

LOCATION.--Lat 31°52'14", long 81°23'53", Hydrologic Unit 03060204, north of Midway, Ga., near intersection of Georgia Highway 196 and U.S. Highway 17.

Owner: U.S. Geological Survey, test well 1.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 789 ft, cased to 410 ft, open hole.

DATUM.--Altitude of land-surface datum is 17 ft.

Measuring point: Top of 4 in. casing, 1.33 ft above land-surface datum.

REMARKS.--Well pumped July 11, 1979; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 15, 1976.

PERIOD OF RECORD.--February 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.34 ft below land-surface datum, March 6, 1967; lowest, 22.28 ft below land-surface datum, August 10-11, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.70	16.50	16.10	16.45	16.52	17.03	17.80	18.14	18.45	18.85	19.05	18.86
2	17.48	16.35	16.25	16.30	16.50	17.19	17.81	18.13	18.42	18.86	18.98	18.83
3	17.39	16.45	16.35	16.30	16.40	17.23	17.83	18.09	18.48	18.84	18.89	18.68
4	17.47	16.65	16.40	16.50	16.38	17.21	17.83	18.08	18.58	18.79	18.74	18.64
5	17.35	16.65	16.35	16.55	16.45	17.23	17.78	18.08	18.61	18.75	18.75	18.72
6	17.28	16.45	16.28	16.53	16.55	17.24	17.82	18.06	18.65	18.79	18.80	18.60
7	17.22	16.50	16.20	16.50	16.62	17.22	17.92	18.02	18.67	18.86	18.77	18.79
8	17.16	16.60	16.10	16.45	16.55	17.23	17.98	18.00	18.70	18.87	18.69	18.85
9	17.10	16.60	16.10	16.40	16.60	17.31	17.90	18.05	18.75	18.90	18.61	18.90
10	17.07	16.40	16.15	16.43	16.70	17.42	17.86	18.02	18.76	18.94	18.52	18.90
11	16.95	16.45	16.25	16.45	16.75	17.48	17.93	18.03	18.78	18.84	18.59	18.70
12	17.05	16.65	16.25	16.50	16.73	17.47	17.95	17.99	18.79	18.79	18.71	18.53
13	17.15	16.45	16.30	16.55	16.75	17.49	17.95	18.02	18.78	18.80	18.69	18.56
14	17.10	16.25	16.30	16.50	16.78	17.54	17.96	18.08	18.76	18.90	18.73	18.52
15	16.90	16.45	16.25	16.40	16.75	17.57	17.94	18.13	18.85	18.92	18.64	18.70
16	16.95	16.35	16.10	16.40	16.70	17.67	17.97	18.18	18.86	18.91	18.72	18.86
17	16.90	16.25	15.90	16.42	16.80	17.75	18.02	18.17	18.87	18.89	18.84	18.90
18	17.00	16.35	15.85	16.30	16.95	17.79	18.10	18.19	18.90	18.87	18.90	18.84
19	17.08	16.40	16.10	16.35	16.95	17.83	18.11	18.19	18.93	18.87	18.85	18.80
20	17.00	16.50	16.10	16.45	16.91	17.87	18.18	18.21	18.86	18.88	18.62	18.93
21	16.75	16.55	16.15	16.48	16.87	17.85	18.20	18.27	18.72	18.90	18.76	18.89
22	16.75	16.35	16.45	16.48	16.81	17.79	18.12	18.35	18.86	18.85	18.84	18.78
23	16.70	16.15	16.43	16.22	16.81	17.77	18.10	18.43	18.96	18.73	18.76	18.76
24	16.80	16.15	16.20	16.05	16.80	17.69	18.06	18.54	18.97	18.82	18.62	18.82
25	16.80	16.25	16.50	16.25	16.83	17.68	18.06	18.58	18.94	18.92	18.74	18.96
26	16.78	16.50	16.60	16.40	16.83	17.70	18.03	18.55	18.88	18.96	18.90	19.00
27	16.60	16.45	16.43	16.45	16.89	17.75	18.08	18.50	18.81	18.96	18.76	18.93
28	16.70	16.20	16.48	16.45	16.97	17.79	18.13	18.45	18.79	19.08	18.62	18.73
29	16.75	---	16.60	16.52	16.93	17.77	18.15	18.40	18.78	19.02	18.74	18.71
30	16.65	---	16.55	16.52	16.88	17.80	18.15	18.44	18.75	19.05	18.84	18.95
31	16.65	---	16.42	---	16.90	---	18.14	18.45	---	19.07	---	19.04
MEAN	17.01	16.42	16.27	16.42	16.74	17.55	18.00	18.22	18.76	18.89	18.76	18.80

CAL YR 1983 MEAN 17.66 HIGH 15.85 LOW 19.08

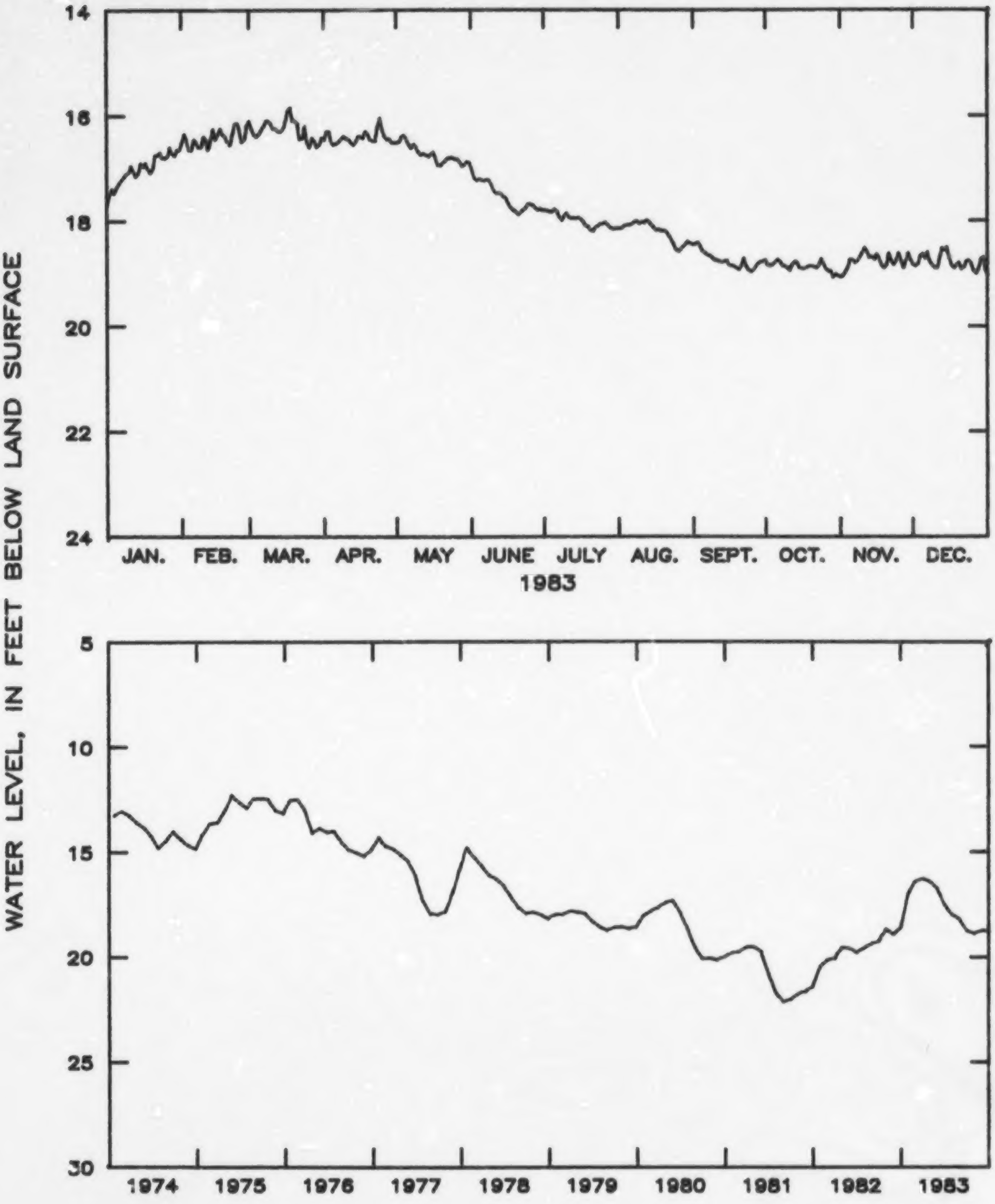


Figure 2.7.4.2-6.---Water level in observation well 34N089, Liberty County.

35M013 HARRIS NECK MCINTOSH COUNTY

313826081152601 Local number, 35M013.

LOCATION.—Lat 31°38'23", long 81°15'42", Hydrologic Unit 03060204, 8.5 mi east of U.S. Highway 17 at Harris Neck Wildlife Refuge.

Owner: U.S. Department of the Interior, Fish and Wildlife Service.

AQUIFER.—Floridan aquifer system.

WELL CHARACTERISTICS.—Drilled unused supply well, diameter 10 in., depth 553 ft, cased to 376 ft, open hole.

DATUM.—Altitude of land-surface datum is 16.3 ft.

Measuring point: Floor of recorder shelter, 3.2 ft above land-surface datum.

REMARKS.—Well pumped August 3, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 16, 1976.

PERIOD OF RECORD.—September 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.—Highest water level, 4.35 ft below land-surface datum, October 4, 1966; lowest, 20.45 ft below land-surface datum, December 19, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.13	16.18	15.85	15.85	16.08	16.05	16.46	16.83	16.63	17.08	17.15	17.42
2	16.93	16.05	16.10	15.75	16.10	16.15	16.49	16.82	16.55	17.17	17.14	17.37
3	16.95	16.35	16.23	16.00	16.03	16.14	16.58	16.79	16.68	17.17	17.09	17.22
4	17.03	16.65	16.25	16.15	16.00	16.20	16.56	16.71	16.76	17.10	17.01	17.21
5	16.94	16.55	16.18	16.15	16.03	16.21	16.46	16.68	16.72	17.07	16.86	17.33
6	16.99	16.20	16.15	16.12	16.15	16.13	16.37	16.60	16.75	17.12	16.97	17.19
7	16.94	16.35	16.12	16.15	16.12	16.08	16.31	16.54	16.83	17.10	17.00	17.61
8	16.85	16.47	16.00	16.05	16.00	16.02	16.24	16.50	16.86	16.98	16.74	17.56
9	16.69	16.37	16.03	16.00	15.95	15.88	16.24	16.37	16.92	16.99	16.79	17.58
10	16.64	16.05	16.00	16.08	15.97	15.91	16.26	16.42	16.96	17.04	16.83	17.61
11	16.60	16.12	16.05	16.00	16.00	15.93	16.30	16.62	17.03	16.91	17.08	17.40
12	16.90	16.40	16.05	15.90	15.96	15.92	16.38	16.59	17.06	17.03	17.13	17.23
13	16.80	15.90	16.00	15.92	15.89	16.04	16.44	16.65	17.06	17.07	17.11	17.31
14	16.75	15.85	16.00	15.88	16.00	16.05	16.46	16.52	17.12	17.24	17.15	17.32
15	16.65	16.18	15.88	15.90	15.96	16.10	16.44	16.58	17.00	17.22	17.13	17.49
16	16.68	16.05	15.50	15.95	15.98	16.07	16.46	16.56	16.95	17.16	17.21	17.66
17	16.63	16.00	15.30	15.93	15.96	16.19	16.50	16.52	17.09	17.17	17.33	17.60
18	16.65	16.10	15.40	15.85	15.92	16.24	16.53	16.58	17.19	17.13	17.27	17.43
19	16.75	16.13	15.80	15.83	16.01	16.26	16.62	16.66	17.17	17.11	17.22	17.31
20	16.35	16.23	15.90	15.85	16.10	16.24	16.76	16.64	17.12	16.99	17.02	17.30
21	16.10	16.17	15.75	16.00	16.14	16.24	16.79	16.62	17.11	16.97	17.23	17.28
22	16.33	15.94	16.32	16.00	16.03	16.20	16.74	16.66	17.14	16.86	17.25	17.34
23	16.30	16.00	16.15	15.65	16.01	16.19	16.64	16.76	17.18	16.76	17.14	17.39
24	16.48	15.95	15.85	15.75	15.98	16.24	16.57	16.78	17.20	16.83	17.06	17.64
25	16.50	15.90	16.00	15.88	15.96	16.28	16.55	16.76	17.18	16.93	17.36	17.68
26	16.45	16.10	16.03	15.92	15.90	16.32	16.49	16.74	17.06	16.84	17.34	17.64
27	16.25	16.00	15.90	16.00	15.99	16.42	16.52	16.73	17.06	16.99	17.19	17.56
28	16.20	15.68	16.08	16.02	15.98	16.48	16.59	16.70	17.02	17.15	17.16	17.42
29	16.27	---	16.05	16.10	15.90	16.46	16.60	16.66	16.96	17.28	17.42	17.39
30	16.15	---	15.95	16.10	15.94	16.46	16.66	16.64	17.00	17.16	17.50	17.58
31	16.25	---	15.82	---	15.98	---	16.76	16.61	---	17.20	---	17.60
MEAN	16.62	16.14	15.96	15.96	16.00	16.17	16.51	16.64	16.98	17.06	17.13	17.44

CAL YR 1983 MEAN 16.55 HIGH 15.30 LOW 17.68

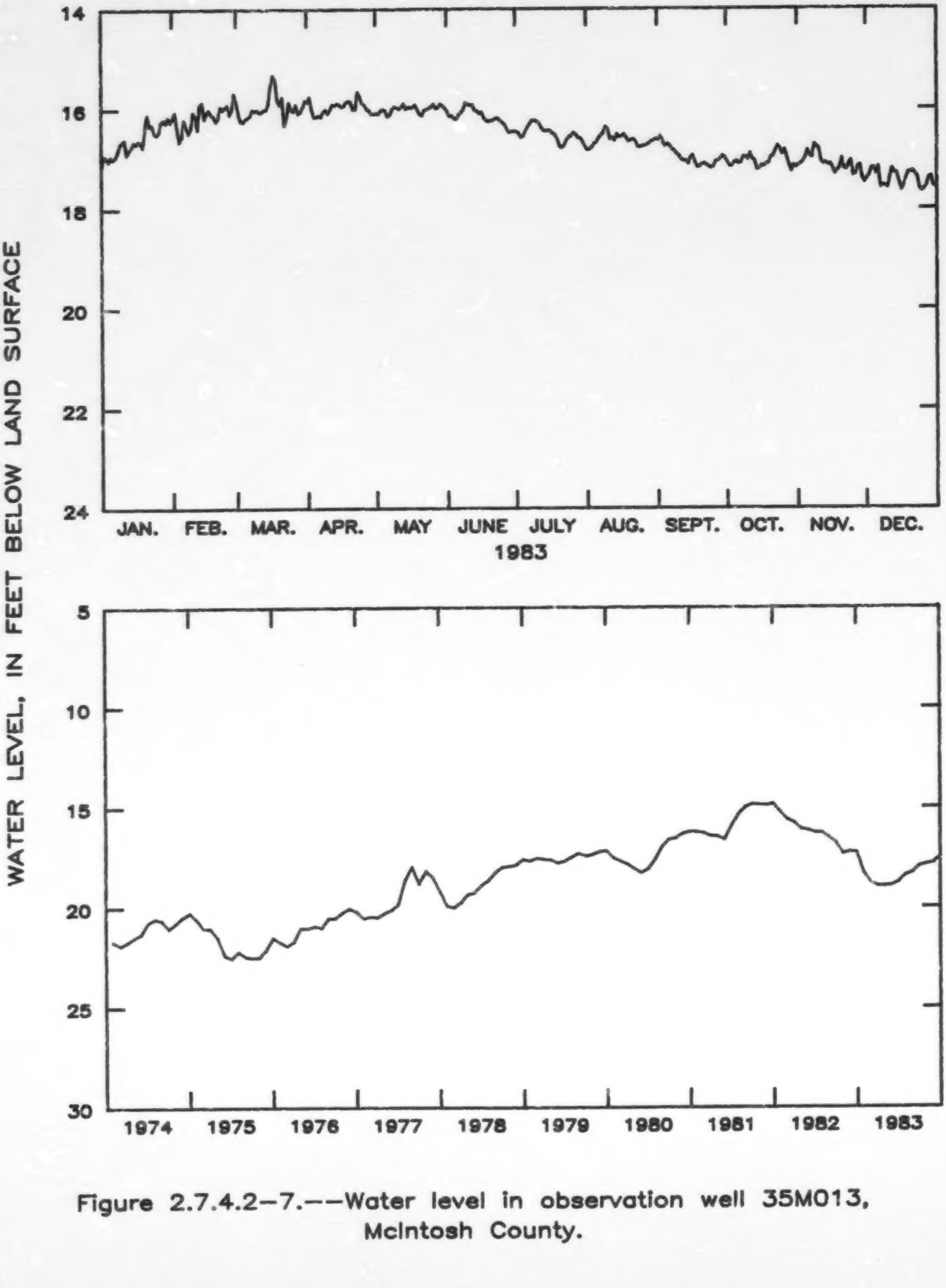


Figure 2.7.4.2-7.—–Water level in observation well 35M013, McIntosh County.

2.7.4.3 Brunswick area

Water levels in the Floridan aquifer system in the Brunswick area are affected by ground-water pumpage of about 80 Mgal/d for municipal and industrial use. Partial industrial shutdowns during 1982, the installation of an evaporative cooling tower by a major water user in July 1982, and other water conservation measures reduced industrial pumpage by about 20 Mgal/d and allowed ground-water levels to recover significantly from the record lows of 1981. This rising trend continued into 1983.

Mean annual water levels in water-bearing zones of the Floridan aquifer system in the Brunswick area ranged from 5.0 to 6.2 feet higher in 1983 than in 1982. Levels in the brackish-water zone were from 0.3 foot to 4.8 feet higher in 1983 than in 1982. At wells 34H391 and 33J044 tapping the brackish-water zone, new record highs were recorded in December 1983.

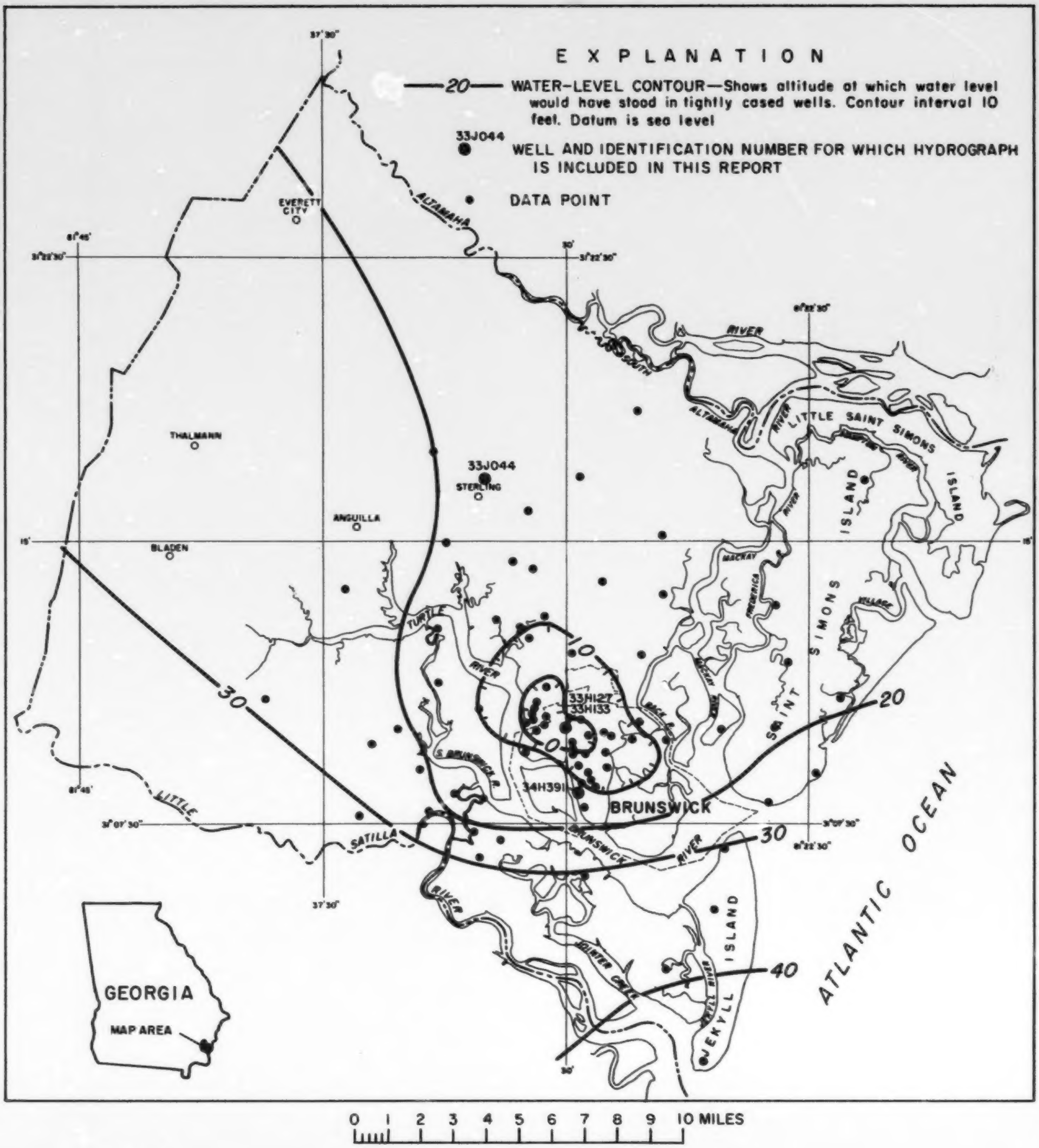

EXPLANATION
20 WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Contour interval 10 feet. Datum is sea level
33J044 WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPH IS INCLUDED IN THIS REPORT
DATA POINT
EVERETT CITY
THALMANN
33J044
STERLING
ANGUILLA
BLADEN
ALTAMAHA
SOUTH
RIVER
ALTAMAHA
LITTLE SAINT SIMONS
ISLAND
ISLAND
SAINT
SIMONS
MACKAY
FREDERICA
RIVER
VILLAGE
TURTLE
RIVER
33H127
33H133
34H391
BRUNSWICK
BRUNSWICK
RIVER
S. BRUNSWICK R.
LITTLE
SATILLA
RIVER
JOINTER CREEK
JEKYLL
ISLAND
ATLANTIC OCEAN
10
0
20
30
30
40
GEORGIA
MAP AREA
0 1 2 3 4 5 6 7 8 9 10 MILES

Figure 2.7.4.3-1.—Observation well locations and the water level in the Floridan aquifer system in the Brunswick area, November 1983.

33H127 TEST WELL 3 GLYNN COUNTY

311007081301701 Local number, 33H127.
LOCATION.--Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, in south corner of Greenwood Cemetary in Brunswick.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 1,002 ft, cased to 823 ft, open hole.
DATUM.--Altitude of land-surface datum is 6 ft.
Measuring point: Top of 4-in. nipple on recorder, 4.50 ft above land-surface datum.
REMARKS.--Water levels for periods of missing recorder record, January 12-29 and October 18, were estimated. Well was flowing January 1-5, March 13 to April 31, June 4-15, 19, 21-26, 28-29, October 5-6, and December 25-29.
PERIOD OF RECORD.--August 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.00 ft above land-surface datum, October 9, 1962; lowest, 11.19 ft below land-surface datum, July 14, 1977.

Water level, in feet above or below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	-1.19	-0.02	---	.06	-0.60	1.08	.44	-0.62	-0.80	-0.37	-0.99
2	---	-1.11	-0.54	---	-0.16	-0.12	.84	.54	-0.60	1.20	-0.08	-0.96
3	---	-1.40	-0.85	---	.14	-0.32	1.01	.20	-0.69	3.56	-0.22	-0.87
4	---	-1.89	-0.89	---	-0.32	---	1.13	.06	-0.60	3.63	-0.10	-0.73
5	---	-1.75	-0.90	---	-0.32	---	.98	.06	-0.66	---	-0.30	-0.85
6	.28	-1.28	-0.63	---	-0.42	---	.93	.09	-1.09	---	-0.47	-0.76
7	-0.32	-1.19	-0.61	---	-0.26	---	1.22	-0.06	-1.50	2.19	-0.56	-0.83
8	-0.50	-1.00	-0.12	---	-0.32	---	.41	.22	-1.46	.50	-0.65	-0.32
9	.07	-1.03	.20	---	-0.34	---	.72	-0.14	-1.74	-0.18	-0.73	-0.71
10	.06	-1.04	-0.17	---	-0.02	---	.46	-0.59	-2.08	-0.20	-0.73	-0.34
11	.15	-1.48	.15	---	.01	---	.07	-0.61	-1.82	-0.22	-0.91	.06
12	.00	-1.52	.16	---	-0.05	---	.30	-0.55	-2.27	.19	-0.91	.83
13	-0.06	-1.10	---	---	-0.04	---	-0.26	-0.02	-2.34	-0.30	-0.88	1.08
14	-0.05	-0.80	---	---	-0.66	---	-0.52	.08	-2.49	-0.33	-0.96	1.88
15	.16	-0.26	---	---	-0.68	---	-0.37	-0.30	-2.43	-0.53	-0.86	1.71
16	-0.04	-0.12	---	---	-0.58	.50	-0.17	.06	-2.38	-0.52	-0.94	1.78
17	-0.35	-0.05	---	---	-0.30	.24	-0.10	-0.15	-2.20	-0.54	-0.69	1.79
18	-0.43	-0.57	---	---	-0.43	.40	-0.65	-0.56	-1.99	-0.55	-0.94	1.98
19	-0.37	-0.25	---	---	-0.58	---	-0.29	-0.68	-1.73	-0.56	-0.98	2.00
20	-0.22	-0.52	---	---	-0.28	.36	-0.92	-0.70	-1.54	-0.62	-0.71	1.65
21	-0.24	-0.52	---	---	-0.52	---	-0.89	-0.54	-1.37	-0.44	-0.88	1.75
22	-0.43	-0.15	---	---	-0.77	---	-0.82	-0.50	-1.32	-0.29	-0.63	2.42
23	-0.48	-0.10	---	---	-0.68	---	-0.71	-1.15	-1.27	-0.17	-0.66	3.65
24	-0.73	-0.32	---	---	-0.28	---	-0.34	-1.38	-1.19	.58	-0.56	4.06
25	-0.90	-0.42	---	---	-0.63	---	-0.18	-0.92	-1.03	-0.54	-0.78	---
26	-0.91	-0.52	---	---	-0.69	---	.13	-0.94	-0.91	-0.06	-0.87	---
27	-0.73	-0.44	---	---	-0.27	.54	.26	-1.12	-0.82	-0.51	-0.86	---
28	-0.85	-0.40	---	---	.01	---	.42	-1.01	-0.72	-1.03	-0.90	---
29	-0.96	---	-0.34	.46	.04	---	.48	-0.94	-0.48	-1.07	-0.67	---
30	-0.82	---	-0.50	.20	-0.18	1.17	.64	-0.86	-0.30	-0.82	-0.99	4.06
31	-1.17	---	.20	---	.06	---	.79	-0.75	---	-0.59	---	3.99
MEAN	-0.38	-0.80	-0.32	.33	-0.31	.24	.18	-0.41	-1.39	.03	-0.69	1.05

CAL YR 1983 MEAN -0.29 MAX 4.06 MIN -2.49

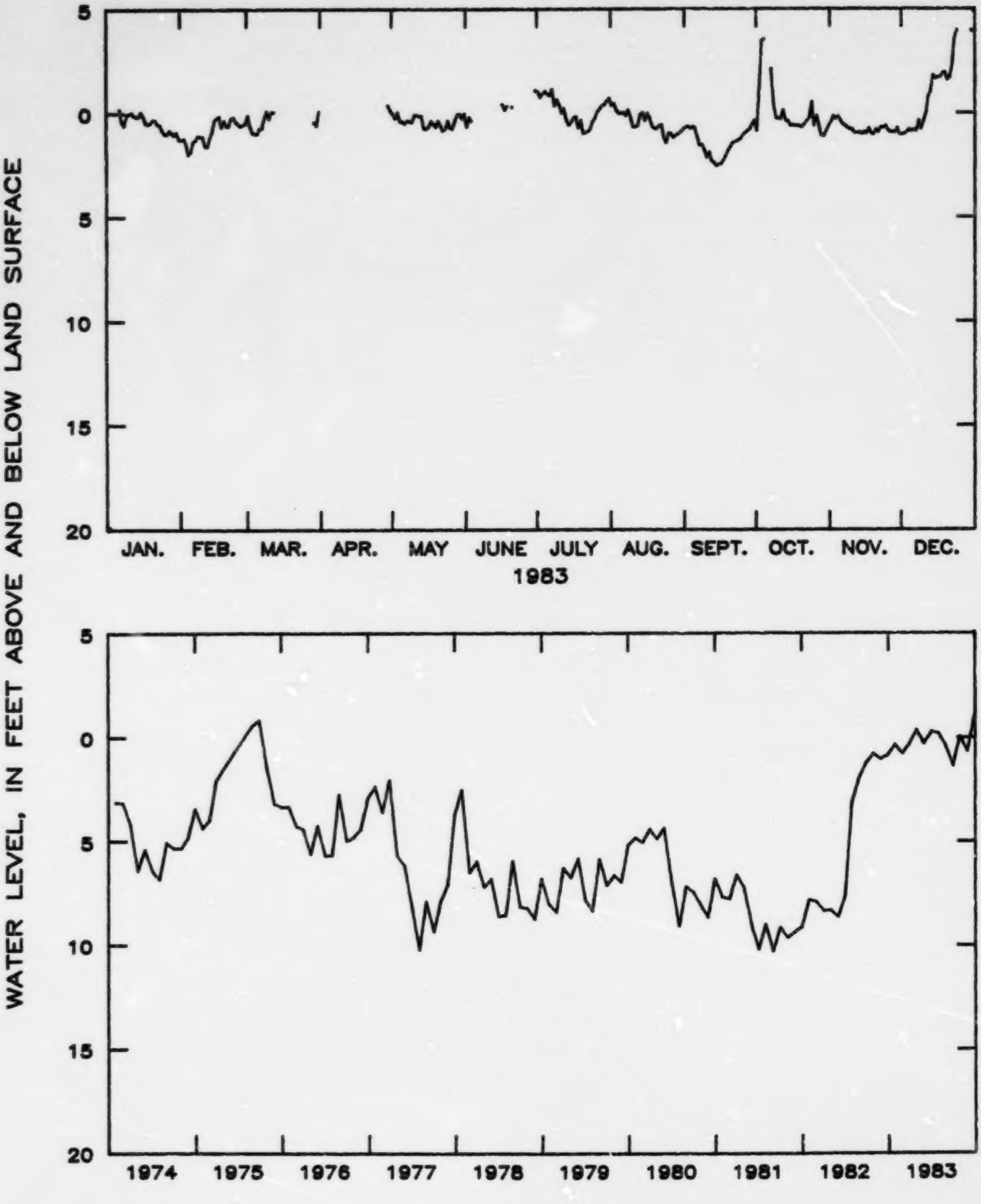


Figure 2.7.4.3-2.--Water level in observation well 33H127, lower water-bearing zone, Glynn County.

33H133 TEST WELL 6 GLYNN COUNTY

311007081301702 Local number, 33H133.

LOCATION.—Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, near the intersection of Newcastle and Oak Streets to the south of the cemetery in Brunswick.

Owner: U.S. Geological Survey, test well 6.

AQUIFER.—Floridan aquifer system.

WELL CHARACTERISTICS.—Drilled observation well, diameter 4 in., depth 790 ft, cased to 520 ft, open hole.

DATUM.—Altitude of land-surface datum is 7 ft.

Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.

REMARKS.—Well pumped monthly; water-quality samples collected at conclusion of pumping. Borehole geophysical survey conducted September 26, 1977. Water levels for periods of missing recorder record, February 27, March 1-2, June 12-28, and December 30-31, were estimated. Well was flowing June 7-11 and December 24-30.

PERIOD OF RECORD.—January 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.—Highest water level, 9.07 ft above land-surface datum, December 26, 1965; lowest, 21.87 ft below land-surface datum, July 22, 1977.

Water level, in feet above or below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	6.80	9.50	8.70	6.90	8.27	8.88	6.27	6.57	8.80	8.67	6.76	8.52
2	7.52	9.42	9.23	6.27	8.45	8.40	6.63	6.42	9.07	7.48	6.58	8.83
3	5.85	9.72	9.56	5.84	7.86	8.18	6.25	7.00	9.14	6.41	7.36	8.64
4	5.32	10.40	9.50	5.55	8.66	8.66	5.81	7.44	8.91	6.17	7.32	8.61
5	6.78	10.04	9.66	5.32	8.38	6.00	5.72	7.24	8.82	5.69	7.65	8.88
6	8.30	9.41	9.19	6.00	8.80	2.05	6.78	7.36	9.30	5.28	8.02	8.42
7	9.14	9.16	9.32	6.58	8.57	---	6.16	7.48	9.43	6.40	8.34	8.43
8	9.25	9.18	8.18	6.43	8.66	---	7.32	7.05	9.74	7.46	8.80	7.70
9	8.22	9.37	7.42	6.72	8.54	---	6.99	7.75	10.38	8.07	8.62	8.36
10	8.01	9.13	8.15	6.62	8.10	---	7.56	8.64	10.91	7.81	8.55	7.31
11	7.88	9.98	8.12	6.98	8.18	---	7.72	8.35	10.72	7.75	8.85	6.10
12	6.71	10.08	7.87	6.89	8.14	1.40	7.66	7.92	11.16	6.98	8.78	5.73
13	7.93	9.52	8.12	7.08	8.18	3.55	8.40	6.94	11.27	7.63	8.72	5.43
14	7.56	8.91	8.69	6.84	9.10	3.93	8.63	7.02	11.32	7.87	8.38	4.26
15	7.75	8.38	8.70	5.91	9.14	4.71	8.69	8.08	10.92	8.30	8.66	3.96
16	8.94	8.02	8.32	6.84	9.10	6.66	8.04	7.89	10.94	8.28	8.71	3.38
17	9.42	8.08	8.09	6.76	8.60	8.60	7.99	8.36	10.47	8.24	7.91	3.38
18	8.51	8.59	7.36	7.00	8.89	8.29	8.47	9.08	10.17	8.02	8.48	3.08
19	8.60	8.22	7.80	6.58	9.02	7.81	7.88	9.36	9.61	8.35	8.92	4.27
20	8.64	8.54	8.02	6.39	8.62	8.14	8.19	9.30	9.08	8.47	8.28	3.60
21	9.17	8.58	7.63	6.78	9.00	8.11	8.51	9.02	9.08	7.70	8.70	4.09
22	8.78	7.81	7.30	6.54	9.04	7.33	8.43	9.00	8.90	7.85	7.87	3.57
23	9.52	8.21	7.46	6.04	9.04	7.18	8.19	9.82	8.99	7.60	8.29	2.07
24	9.95	8.64	8.22	6.10	8.30	6.52	7.35	10.00	9.00	7.18	7.94	---
25	9.76	8.81	8.51	5.90	8.94	6.78	7.24	10.44	8.27	7.71	8.48	---
26	9.50	8.94	8.78	6.24	8.92	7.48	6.48	10.39	8.67	6.76	8.77	---
27	9.20	8.98	8.58	6.26	8.18	8.06	6.60	9.95	8.18	7.64	8.81	---
28	9.42	9.06	8.21	7.06	7.82	7.64	6.13	9.69	8.23	8.88	8.92	---
29	9.53	---	8.52	7.53	7.82	7.39	5.95	9.36	7.27	8.82	8.11	---
30	9.23	---	8.74	8.23	7.98	6.45	6.12	9.15	7.84	7.99	8.74	.00
31	9.42	---	7.44	---	7.80	---	5.77	9.26	---	7.36	---	1.00
MEAN	8.41	9.02	8.37	6.54	8.52	6.73	7.22	8.43	9.49	7.57	8.28	5.50

CAL YR 1983 MEAN 7.89 HIGH .00 LOW 11.32

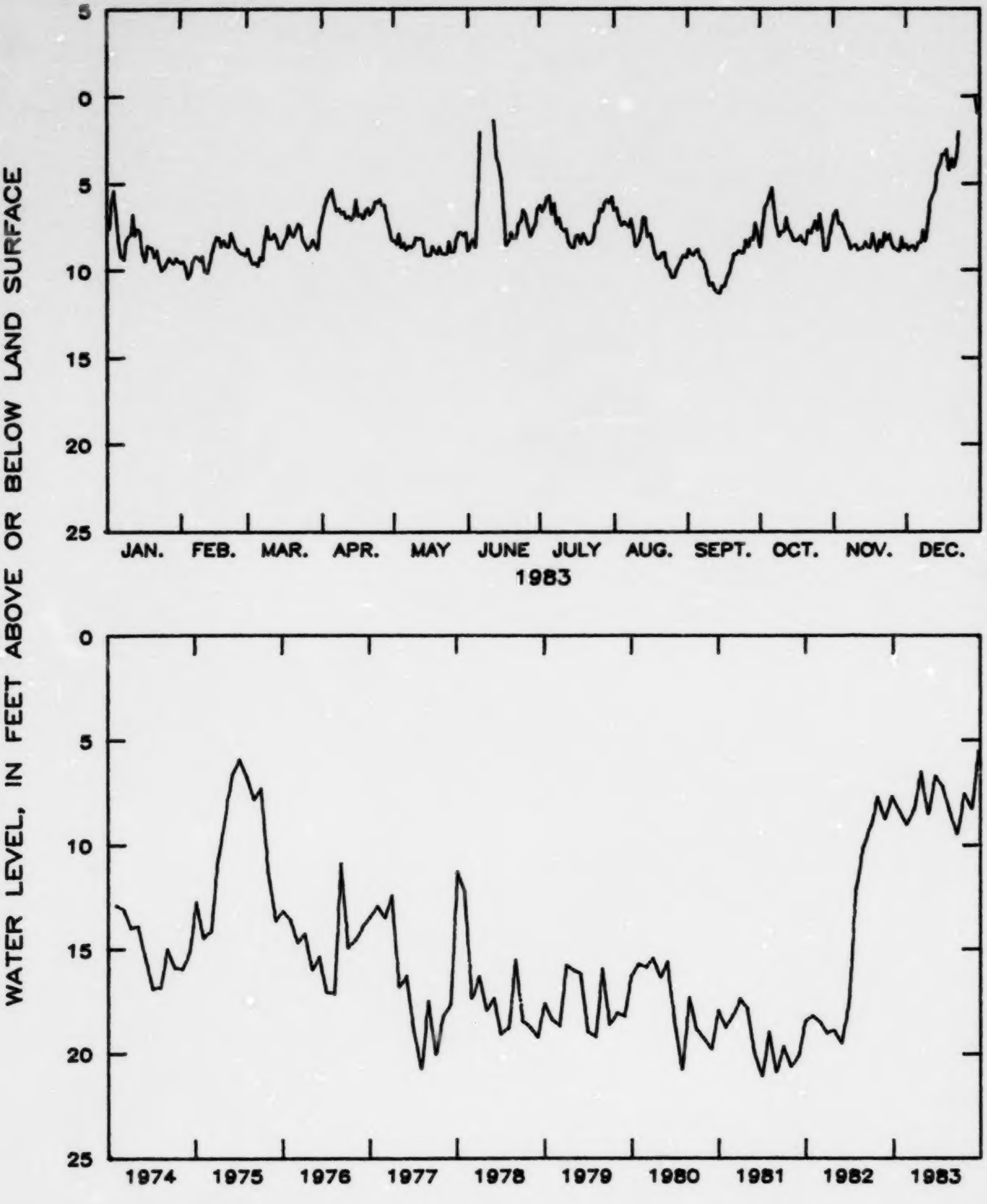


Figure 2.7.4.3-3.—Water level in observation well 33H133, upper water-bearing zone, Glynn County.

34H391 TEST WELL 16 GLYNN COUNTY

310818081294201 Local number, 34H391.

LOCATION.—Lat 31°08'18", long 81°29'42", Hydrologic Unit 03070203, located near intersection of Albermarle Street/Ocean Boulevard and Bay Street in Brunswick.

Owner: U.S. Geological Survey, test well 16.

AQUIFER.—Floridan aquifer system.

WELL CHARACTERISTICS.—Drilled unused observation well, diameter 6 in., depth 1,150 ft, cased to 1,070 ft, open hole.

DATUM.—Altitude of land-surface datum is 7.71 ft.

Measuring point: Floor of recorder shelter at land-surface datum.

REMARKS.—Water levels for periods of missing recorder record, April 4-13, June 16, July 13, 14, September 5, 6, and December 11, 12, were estimated. Well was flowing September 29 to October 7 and December 25-28.

PERIOD OF RECORD.—August 1975.

EXTREMES FOR PERIOD OF RECORD.—Highest water level, 10.21 ft above land-surface datum, December 23, 1983; lowest, 2.96 ft below land-surface datum, July 27, 1977.

Water level, in feet above or below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.88	6.63	7.41	7.76	7.47	7.03	7.67	8.00	6.68	7.59	7.68	7.25
2	7.80	6.67	6.91	7.76	7.44	7.00	7.30	7.90	6.75	7.97	7.68	7.28
3	7.90	6.50	6.36	7.62	7.40	7.00	7.36	7.56	6.71	8.65	7.61	7.49
4	7.62	6.03	6.24	7.48	7.39	6.82	7.46	7.28	6.77	8.81	7.75	7.55
5	7.66	6.11	6.26	7.41	7.32	7.47	7.64	7.31	7.00	9.01	7.59	7.48
6	7.29	6.54	6.30	7.41	7.20	8.48	7.50	7.36	7.05	9.14	7.58	7.51
7	7.04	6.51	6.40	7.52	7.28	---	7.66	7.30	7.06	8.80	7.59	7.36
8	6.90	6.48	6.70	7.68	7.34	---	7.40	7.40	6.92	8.60	7.62	7.44
9	7.27	6.54	6.92	7.80	7.28	---	7.41	7.24	6.81	8.04	7.50	7.42
10	7.38	6.72	6.86	7.80	7.30	---	7.30	6.90	6.61	7.97	7.50	7.59
11	7.24	6.40	6.87	7.79	7.34	---	7.17	6.80	6.39	7.96	7.35	8.05
12	7.04	6.24	6.90	7.78	7.16	8.60	7.10	6.81	6.39	7.93	7.36	8.48
13	7.05	6.64	6.95	7.77	7.20	8.15	6.93	7.09	6.73	7.91	7.43	8.64
14	7.09	6.64	6.86	7.86	6.97	8.07	6.76	7.40	6.66	7.73	7.34	9.14
15	7.31	6.85	6.99	8.06	6.94	7.79	6.64	7.22	6.59	7.74	7.39	9.25
16	7.04	7.18	7.26	8.11	6.90	7.69	6.74	7.07	6.60	7.76	7.33	9.22
17	6.82	7.28	7.47	8.10	7.00	7.60	6.82	7.00	6.73	7.70	7.29	9.42
18	6.79	6.98	7.32	8.16	6.99	7.72	6.74	6.89	6.81	7.70	7.33	9.61
19	6.84	7.08	7.10	8.13	6.87	7.89	6.75	6.78	6.45	7.68	7.38	9.82
20	7.02	7.04	7.29	8.13	6.95	7.76	6.75	6.76	6.62	7.66	7.58	9.75
21	7.02	7.07	7.09	8.03	6.98	7.79	6.76	6.78	6.75	7.75	7.37	9.79
22	6.85	7.34	7.11	8.06	6.98	8.07	6.94	6.60	6.95	7.91	7.34	9.82
23	6.79	7.34	7.12	8.30	6.96	8.12	6.94	6.03	6.95	8.05	7.64	10.21
24	6.56	7.26	7.30	8.42	7.08	8.28	7.53	6.12	7.02	8.08	7.68	---
25	6.44	7.10	6.90	8.36	7.01	8.22	7.62	6.22	7.13	8.19	7.46	---
26	6.51	7.06	6.86	8.13	6.88	8.02	7.79	6.28	7.27	7.58	7.45	---
27	6.61	7.14	7.09	8.12	7.02	7.84	7.94	6.31	7.40	7.13	7.51	---
28	6.47	7.38	6.98	7.94	7.21	8.46	8.06	6.41	7.40	7.45	7.45	---
29	6.54	---	6.88	7.72	7.32	8.18	8.13	6.48	7.62	7.62	7.32	---
30	6.64	---	6.90	7.55	7.30	8.05	8.14	6.58	7.77	7.38	7.32	---
31	6.60	---	7.44	---	7.24	---	8.24	6.65	---	7.52	---	---
MEAN	7.03	6.81	6.94	7.89	7.15	7.84	7.33	6.92	6.89	7.96	7.48	8.50

CAL YR 1983 MEAN 7.37 MAX 10.21 MIN 6.03

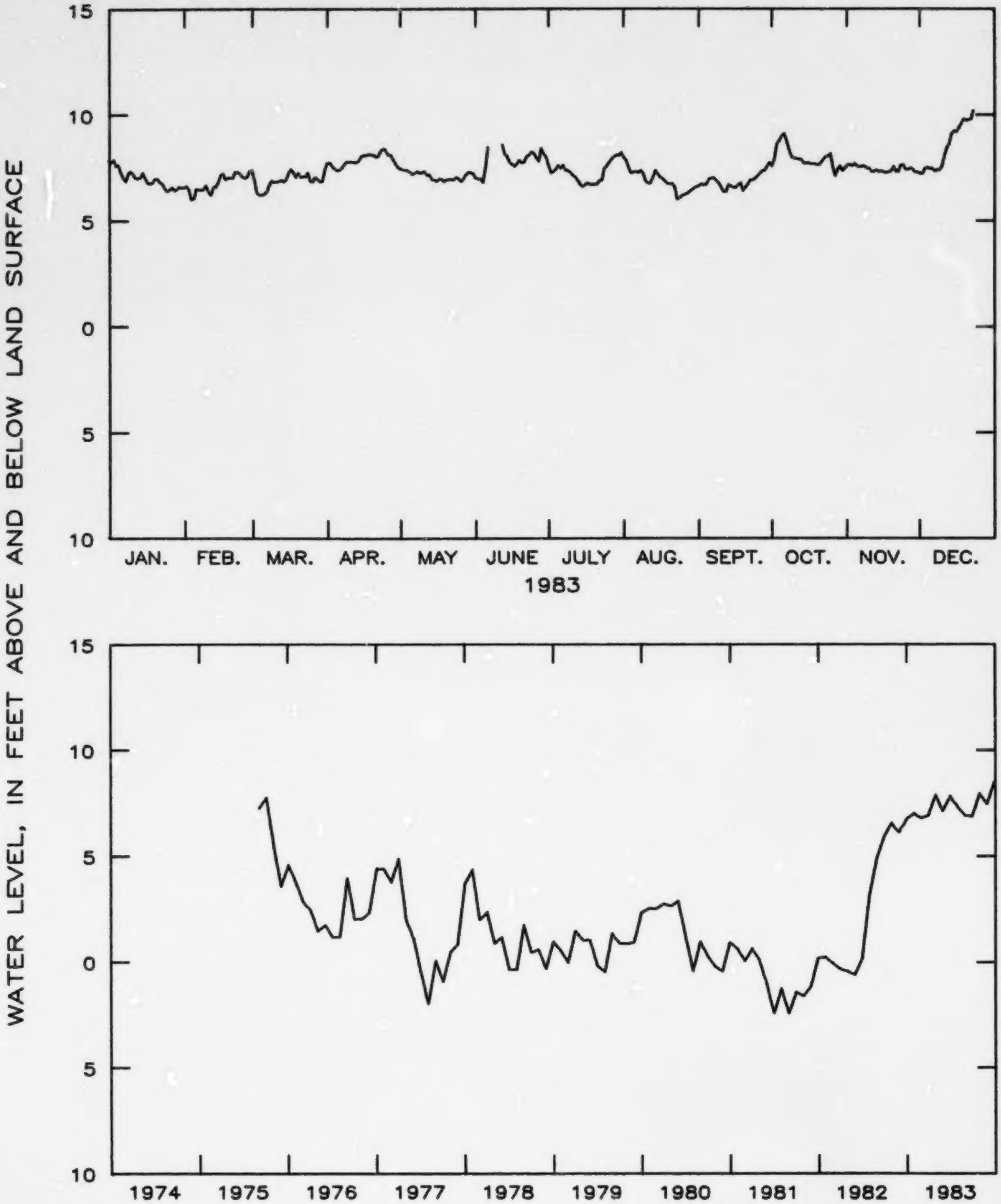


Figure 2.7.4.3–4.——Water level in observation well 34H391, brackish water zone, Glynn County.

33J044 TEST WELL 27 GLYNN COUNTY

311633081324001 Local number, 33J044.

LOCATION.--Lat 31°16'33", long 81°32'40", Hydrologic Unit 03070203, 1.2 mi east of Sterling, off State Highway 99 at the Brunswick Pulp and Paper Lumber Company.

Owner: Brunswick Pulp and Paper Co., USGS test well 27.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled unused observation well, diameter 9 in., depth 2,260 ft, cased to 1,079 ft, open hole.

DATUM.--Altitude of land-surface datum is 20 ft.

Measuring point: Floor of recorder shelter, 4.5 ft above land-surface datum.

REMARKS.--This is the Sterling oil test well. Water level for missing recorder record, August 23, was estimated. Well was flowing June 8-12 and December 25-31.

PERIOD OF RECORD.--May 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.08 ft above land-surface datum, December 24, 1983; lowest, 6.30 ft below land-surface datum, August 11, 1981.

Water level, in feet above or below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.48	1.31	1.64	2.19	2.26	1.85	2.03	1.80	.44	1.23	1.36	1.04
2	2.48	1.44	1.49	2.36	2.22	1.66	1.98	1.73	.75	1.20	1.48	1.08
3	2.20	1.18	1.34	2.29	2.24	1.66	1.94	1.73	.85	1.50	1.57	1.23
4	2.05	.88	1.27	2.14	2.22	1.71	2.02	1.70	.84	1.75	1.60	1.24
5	2.09	.84	1.32	2.06	2.08	1.77	2.09	1.65	.96	1.95	1.49	1.19
6	1.96	1.11	1.36	2.04	1.94	2.20	2.12	1.67	.91	2.09	1.44	1.25
7	1.83	1.07	1.45	2.14	1.92	2.79	2.04	1.70	.81	2.06	1.47	1.07
8	1.73	.98	1.56	2.29	2.04	---	2.04	1.75	.74	1.93	1.55	1.06
9	1.75	1.03	1.65	2.40	1.97	---	2.06	1.75	.66	1.75	1.52	1.05
10	1.87	1.22	1.71	2.39	1.88	---	2.03	1.62	.50	1.65	1.52	1.13
11	1.85	1.06	1.68	2.37	1.92	---	1.93	1.49	.42	1.64	1.38	1.48
12	1.72	1.17	1.66	2.34	1.91	---	1.82	1.44	.40	1.58	1.26	1.74
13	1.64	1.14	1.70	2.32	1.93	2.92	1.72	1.42	.33	1.55	1.29	1.76
14	1.65	1.30	1.70	2.40	1.88	2.71	1.62	1.42	.25	1.36	1.26	1.99
15	1.78	1.12	1.76	2.51	1.86	2.53	1.57	1.39	.12	1.35	1.30	1.98
16	1.70	1.35	2.00	2.54	1.86	2.31	1.48	1.34	.17	1.36	1.18	1.95
17	1.59	1.47	2.24	2.53	1.74	2.10	1.48	1.31	.21	1.35	1.06	2.06
18	1.44	1.34	2.16	2.72	1.68	2.03	1.44	1.24	.28	1.35	1.05	2.28
19	1.38	1.32	1.94	2.64	1.69	2.04	1.34	1.12	.37	1.33	1.10	2.50
20	1.52	1.24	2.01	2.56	1.69	2.00	1.22	1.12	.49	1.32	1.31	2.46
21	1.68	1.28	2.00	2.50	1.74	1.96	1.12	1.10	.67	1.31	1.15	2.51
22	1.50	1.51	1.74	2.52	1.78	2.06	1.18	1.07	.68	1.42	1.10	2.63
23	1.49	1.66	1.83	2.82	1.77	2.07	1.22	.72	.65	1.56	1.25	2.80
24	1.30	1.63	2.04	2.92	1.78	2.15	1.38	.37	.72	1.61	1.36	3.08
25	1.21	1.49	1.76	2.77	1.80	2.20	1.44	.29	.82	1.55	1.20	---
26	1.20	1.32	1.72	2.62	1.74	2.09	1.48	.28	.86	1.51	1.12	---
27	1.31	1.39	1.86	2.58	1.70	1.98	1.52	.33	1.01	1.41	1.23	---
28	1.20	1.64	1.80	2.54	1.77	1.98	1.58	.40	1.01	1.21	1.28	---
29	1.16	---	1.74	2.44	1.91	2.09	1.65	.44	1.14	1.13	1.12	---
30	1.26	---	1.80	2.34	1.98	2.06	1.70	.42	1.25	1.17	1.05	---
31	1.23	---	2.02	---	1.96	---	1.77	.41	---	1.24	---	---
MEAN	1.65	1.27	1.74	2.44	1.90	2.12	1.68	1.17	.64	1.50	1.30	1.77

CAL YR 1983 MEAN 1.59 MAX 3.08 MIN .12

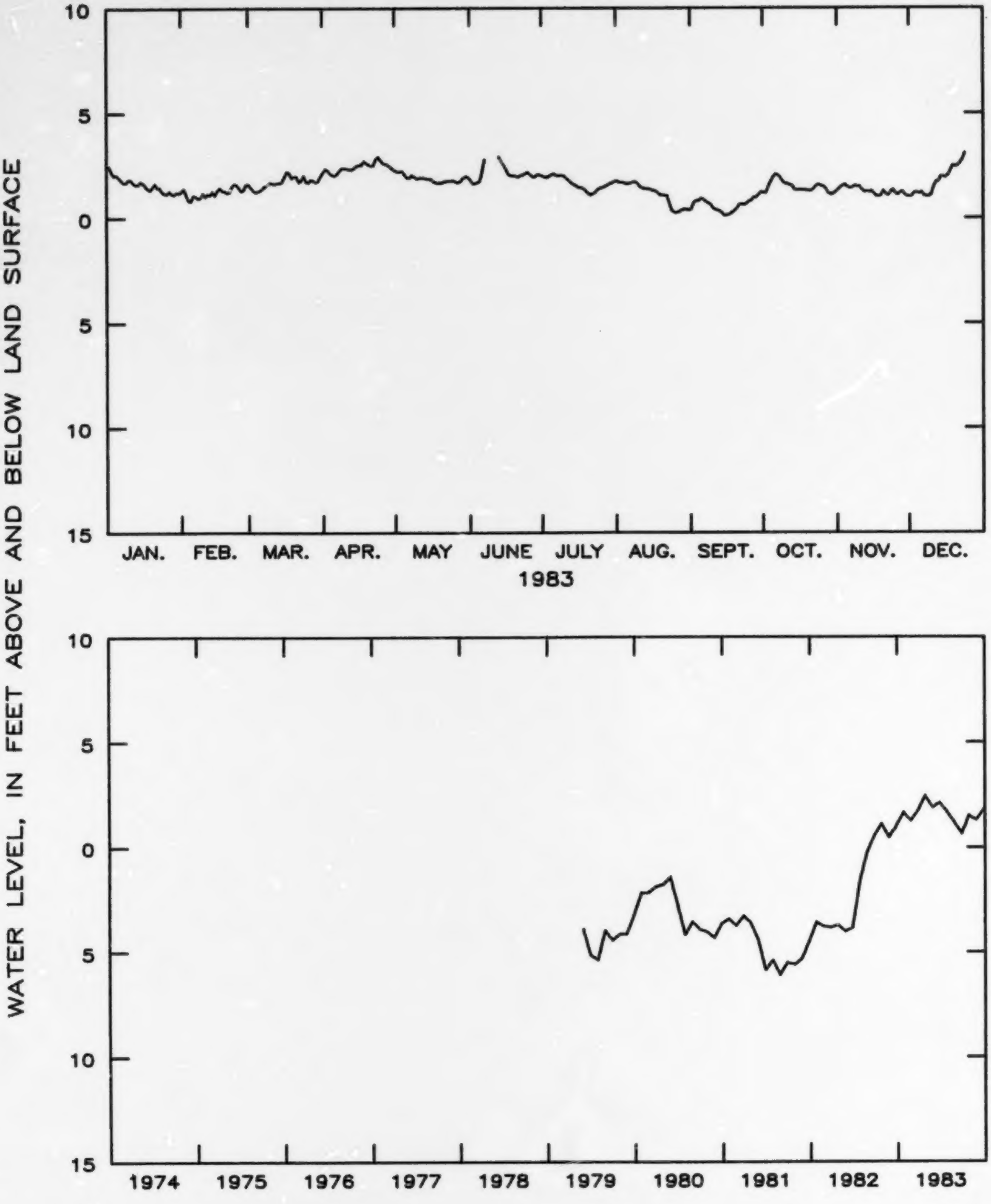


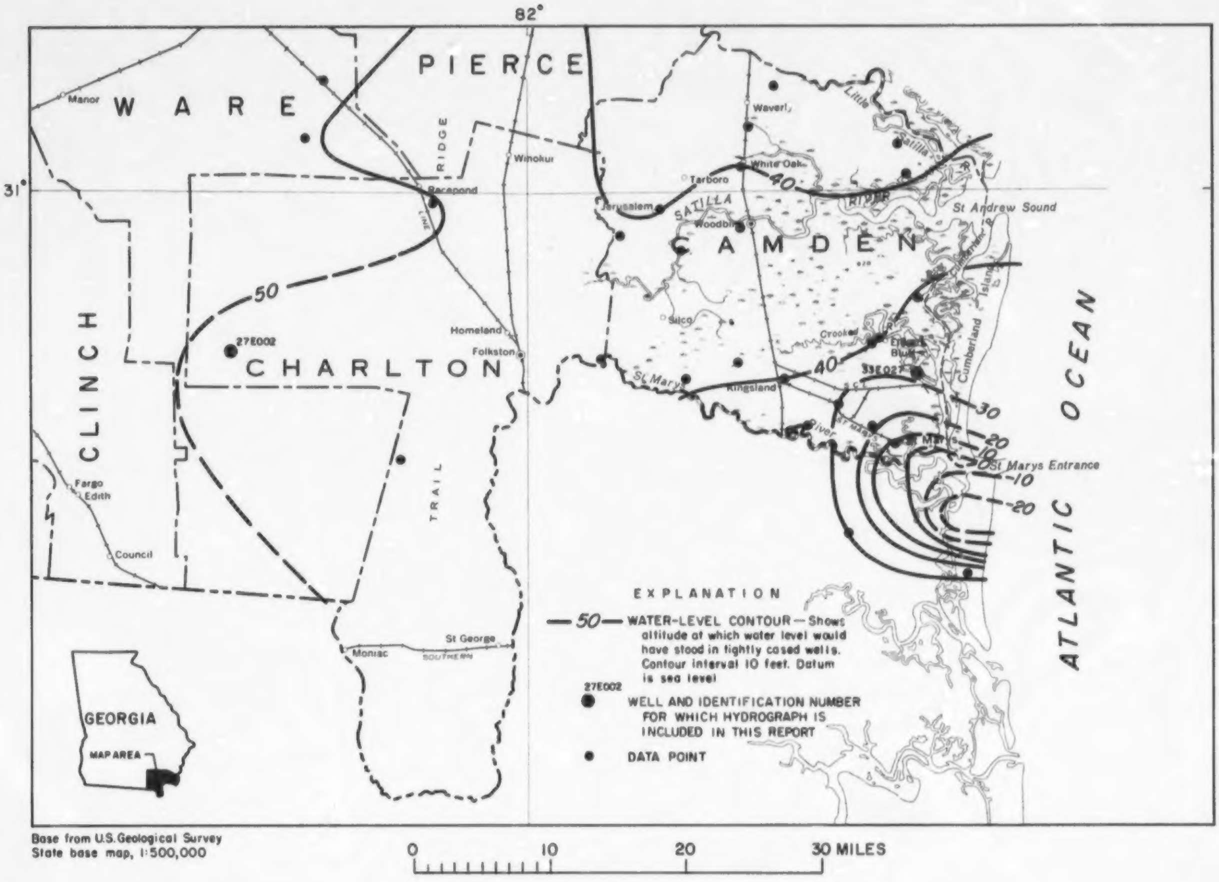
Figure 2.7.4.3–5.——Water level in observation well 33J044, brackish water zone, Glynn County.

2.7.4.4 Kings Bay-Okefenokee Swamp area

Ground-water levels in the Floridan aquifer system in the Kings Bay area are affected by industrial pumpage of about 35 Mgal/d near St. Marys. A reduction in pumping during 1982 allowed water levels to recover from the record lows of 1981. This trend continued into 1983. In March 1983, the water level at well 33E027 near Kings Bay matched the highest recorded water level of December 1982.

The water table in the Okefenokee Swamp area fluctuates seasonally and is affected by precipitation and evapotranspiration. This fluctuation probably affects the water level in the underlying Floridan aquifer system (Callahan, 1964).

Mean annual water levels in the Floridan aquifer system in the Kings Bay-Okefenokee Swamp area were from 2.5 to 2.7 feet higher in 1983 than in 1982.


82°
31°
PIERCE
WARE
CHARLTON
CLINCH
CAMDEN
ATLANTIC OCEAN
Manor
Winokur
Racepond
RIDGE
TRAIL
Homeland
Folkston
Fargo
Edith
Council
Moniac
St George
SOUTHERN
Waverly
White Oak
Tarboro
Jerusalem
Woodbine
SATILLA
RIVER
Little Satilla R
St Andrew Sound
Silco
Crooked R
Ellicott Bluff
Kingsland
St Marys
St Marys River
33E027
Cumberland Island
St Marys Entrance
27E002
50
40
30
20
10
0
-10
-20
GEORGIA
MAP AREA
EXPLANATION
—50— WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Contour interval 10 feet. Datum is sea level
27E002 ● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPH IS INCLUDED IN THIS REPORT
● DATA POINT
0
10
20
30 MILES

Base from U.S. Geological Survey
State base map, 1:500,000

Figure 2.7.4.4-1.—Observation well locations and the water level in the Floridan aquifer system in the Kings Bay-Okefenokee Swamp area, November 1983.

33E027 KINGS BAY CAMDEN COUNTY

304756081311101 Local number, 33E027.
LOCATION.—Lat 30°47'56", long 81°31'11", Hydrologic Unit 03070203, Kings Bay Army Terminal.
  Owner: U.S. Department of the Navy.
AQUIFER.—Floridan aquifer system.
WELL CHARACTERISTICS.—Drilled unused test well, diameter 8 in., depth 1,306 ft, cased to 555 ft, backfilled to 990 ft.
DATUM.—Altitude of land-surface datum is 13.1 ft.
  Measuring point: Top of flange at land-surface datum.
REMARKS.—Water levels for periods of missing recorder record, January 1-4, February 1, March 31 to April 13, May 28 to June 1, June 30 to July 5, August 1-2, 28-31, September 21-26, and October 18-26, were estimated.
PERIOD OF RECORD.—August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level, 24.10 ft above land-surface datum, December 29, 1982 and March 17, 1983; lowest, 14.75 ft above land-surface datum, February 28, 1981.

Water level, in feet above land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	23.46	21.80	22.50	23.04	22.40	23.02	22.57	22.03	22.90	23.40	22.29	21.42
2	23.42	21.75	22.40	23.06	22.40	23.00	22.66	22.02	22.97	23.40	22.22	21.37
3	23.38	21.70	22.60	23.08	22.60	23.10	22.74	22.02	23.15	23.30	22.28	21.95
4	23.34	21.40	22.70	23.10	23.00	23.10	22.83	22.18	23.10	23.15	22.35	22.52
5	23.30	21.50	23.00	23.12	23.30	23.00	22.91	22.15	23.31	23.10	22.45	22.40
6	23.20	22.00	23.00	23.14	23.20	23.00	23.00	22.30	23.26	23.10	22.50	22.60
7	23.40	21.60	23.00	23.16	23.30	22.90	23.00	22.28	23.17	22.95	22.47	22.18
8	23.30	21.50	23.30	23.18	23.40	22.90	23.00	22.55	23.17	23.15	22.56	22.30
9	23.20	21.60	23.20	23.20	23.50	23.00	23.00	22.63	23.18	23.05	22.40	22.40
10	23.00	21.80	22.90	23.22	23.30	22.80	23.00	22.65	23.19	23.00	22.42	22.45
11	23.10	21.60	22.80	23.24	23.40	22.80	23.00	22.65	23.14	22.90	21.65	22.50
12	22.60	21.40	23.00	23.26	23.20	22.80	22.90	22.81	23.15	22.95	22.00	22.63
13	22.60	21.70	23.10	23.28	23.20	22.90	22.90	22.75	22.75	22.90	22.13	22.43
14	22.70	21.70	23.10	23.30	23.20	22.70	23.00	22.84	22.75	22.50	22.34	22.50
15	22.80	21.90	23.10	23.30	23.20	22.80	23.00	22.86	22.84	22.60	22.00	22.05
16	22.60	22.00	23.50	23.00	23.20	22.80	23.00	22.94	23.06	22.80	21.56	22.10
17	22.80	22.10	24.10	23.00	23.10	22.80	23.10	23.04	22.93	22.95	21.37	22.05
18	22.70	21.90	23.90	23.20	23.30	22.80	23.20	23.13	22.95	22.89	21.49	22.31
19	22.60	22.00	23.60	23.20	23.10	22.70	23.00	23.00	23.11	22.84	21.80	22.28
20	22.60	22.00	23.50	23.20	23.30	22.80	22.60	23.08	23.07	22.79	22.40	22.37
21	22.80	21.80	23.30	23.20	23.30	22.70	22.60	23.16	23.13	22.73	22.46	22.37
22	22.60	22.10	23.10	23.30	23.30	22.80	22.60	23.04	23.19	22.68	22.47	22.47
23	22.30	22.00	23.10	23.60	23.10	22.80	22.50	22.90	23.25	22.63	22.63	22.48
24	22.10	22.20	23.10	23.20	23.20	22.70	22.60	22.83	23.32	22.58	22.80	22.20
25	21.90	22.00	23.00	23.20	23.20	22.80	22.50	22.92	23.38	22.53	22.20	---
26	21.80	21.70	22.90	23.20	23.20	22.60	22.60	22.90	23.44	22.47	22.35	---
27	21.80	22.00	23.10	23.10	23.10	22.50	22.50	22.75	23.50	22.42	22.70	---
28	21.50	22.50	23.10	23.10	23.08	22.50	22.40	22.78	23.30	22.15	22.59	---
29	21.70	---	22.80	23.10	23.07	22.40	22.30	22.81	23.30	22.30	21.98	---
30	21.90	---	23.00	22.40	23.05	22.49	21.90	22.84	23.40	22.29	22.05	---
31	21.70	---	23.02	---	23.03	---	22.03	22.87	---	22.24	---	---
MEAN	22.65	21.83	23.09	23.16	23.14	22.80	22.74	22.70	23.15	22.80	22.23	22.26

CAL YR 1983 MEAN 22.73 MAX 24.10 MIN 21.37

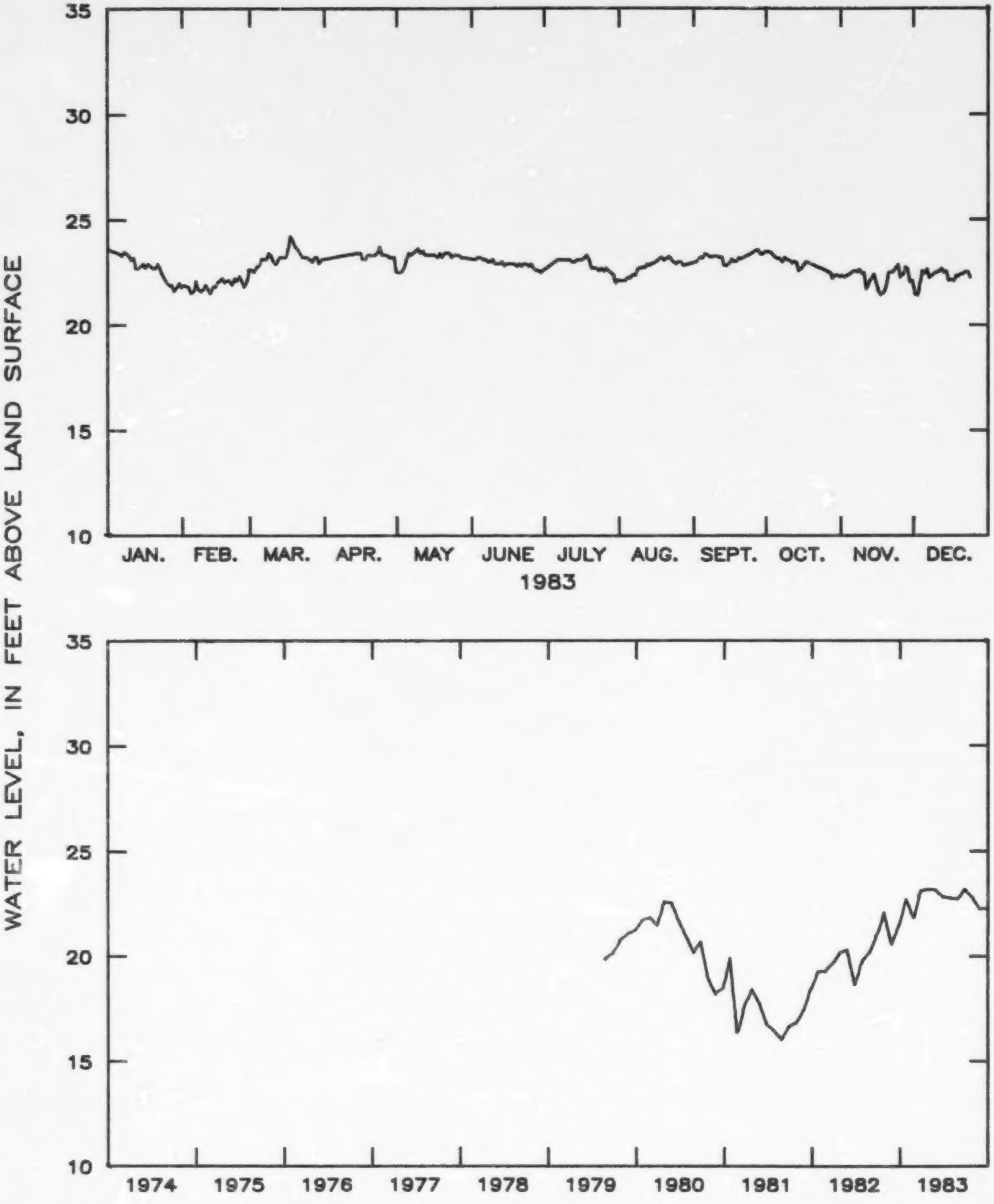


Figure 2.7.4.4-2.--Water level in observation well 33E027, Camden County.

27E002 TEST WELL OK8 CHARLTON COUNTY

304943082213701 Local number, 27E002.

LOCATION.--Lat 30°49'43", long 82°21'37", Hydrologic Unit 03110201, end of Georgia Highway 177 east of Stephen C. Foster State Park.

Owner: U.S. Geological Survey, test well OK 8.

AQUIFER.--Floridan aquifer system.

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 647 ft, cased to 465 ft, open hole.

DATUM.--Altitude of land-surface datum is 116 ft.

Measuring point: Floor of recorder shelter, 4.2 ft above land-surface datum.

REMARKS.--Well pumped Aug. 1, 1978, sounded to obstruction at 484 ft. Well open below obstruction. Water levels for periods of missing recorder record, August 10 to September 15, September 20 to October 12, and December 25-31, were estimated.

PERIOD OF RECORD.--May 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.65 ft below land-surface datum, June 27, 1966; lowest, 71.17 ft below land surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1983 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	67.03	66.08	64.62	63.37	62.67	63.45	64.85	65.58	65.83	66.23	66.47	66.45
2	66.90	66.04	64.71	63.26	62.63	63.62	64.88	65.62	65.84	66.24	66.45	66.42
3	66.84	66.04	64.77	63.22	62.53	63.70	64.92	65.58	65.92	66.22	66.37	66.28
4	66.90	66.04	64.76	63.30	62.44	63.72	64.91	65.65	65.39	66.18	66.26	66.21
5	66.92	66.04	64.65	63.30	62.52	63.77	64.84	65.72	66.00	66.16	66.23	66.27
6	66.86	65.84	64.59	63.26	62.63	63.82	64.83	65.67	66.03	66.18	66.28	66.22
7	66.80	65.72	64.48	63.24	62.69	63.82	64.83	65.56	66.06	66.22	66.30	66.38
8	66.73	65.77	64.37	63.15	62.62	63.84	64.90	65.51	66.06	66.25	66.26	66.41
9	66.64	65.78	64.34	63.05	62.63	63.95	64.89	65.53	66.11	66.25	66.21	66.44
10	66.58	65.56	64.32	62.98	62.74	64.09	64.85	65.59	66.12	66.25	66.14	66.44
11	66.56	65.54	64.34	62.98	62.80	64.16	64.88	65.58	66.10	66.21	66.15	66.22
12	66.60	65.70	64.34	63.02	62.80	64.16	64.91	65.55	66.09	66.17	66.24	66.07
13	66.67	65.50	64.32	63.04	62.80	64.16	64.94	65.55	66.09	66.20	66.27	66.10
14	66.63	65.30	64.30	63.00	62.83	64.18	64.95	65.56	66.07	66.23	66.27	66.03
15	66.54	65.38	64.19	62.92	62.83	64.17	64.93	65.56	66.18	66.30	66.23	66.21
16	66.47	65.32	64.00	62.87	62.80	64.22	64.93	65.66	66.18	66.31	66.29	66.35
17	66.44	65.21	63.77	62.85	62.90	64.30	64.99	65.66	66.24	66.30	66.41	66.38
18	66.45	65.26	63.76	62.73	63.04	64.34	65.06	65.65	66.28	66.27	66.46	66.31
19	66.46	65.30	63.90	62.66	63.09	64.30	65.09	65.65	66.29	66.25	66.40	66.21
20	66.42	65.33	63.84	62.71	63.10	64.43	65.18	65.66	66.18	66.25	66.22	66.24
21	66.30	65.32	63.84	62.76	63.10	64.49	65.27	65.66	66.27	66.28	66.34	66.22
22	66.25	65.13	64.00	62.74	63.08	64.54	65.25	65.70	66.33	66.28	66.40	66.11
23	66.25	64.94	63.96	62.50	63.08	64.60	65.26	65.78	66.36	66.16	66.33	66.07
24	66.31	64.88	63.71	62.62	63.08	64.60	65.26	65.86	66.34	66.12	66.24	66.09
25	66.35	64.91	63.84	62.51	63.12	64.60	65.33	65.88	66.34	66.15	66.30	66.15
26	66.32	65.03	63.90	62.64	63.15	64.67	65.36	65.89	66.29	66.18	66.46	66.14
27	66.20	65.00	63.73	62.70	63.23	64.76	65.38	65.87	66.24	66.27	66.35	65.99
28	66.18	64.74	63.66	62.69	63.34	64.77	65.47	65.83	66.22	66.41	66.23	65.77
29	66.22	---	63.71	62.70	63.34	64.76	65.53	65.80	66.20	66.44	66.33	65.74
30	66.17	---	63.61	62.68	63.32	64.81	65.55	65.81	66.22	66.43	66.43	65.96
31	66.14	---	63.46	---	63.33	---	65.57	65.83	---	66.47	---	66.04
MEAN	66.52	65.45	64.12	62.92	62.91	64.23	65.09	65.68	66.15	66.25	66.31	66.19

CAL YR 1983 MEAN 65.15 HIGH 62.44 LOW 67.03

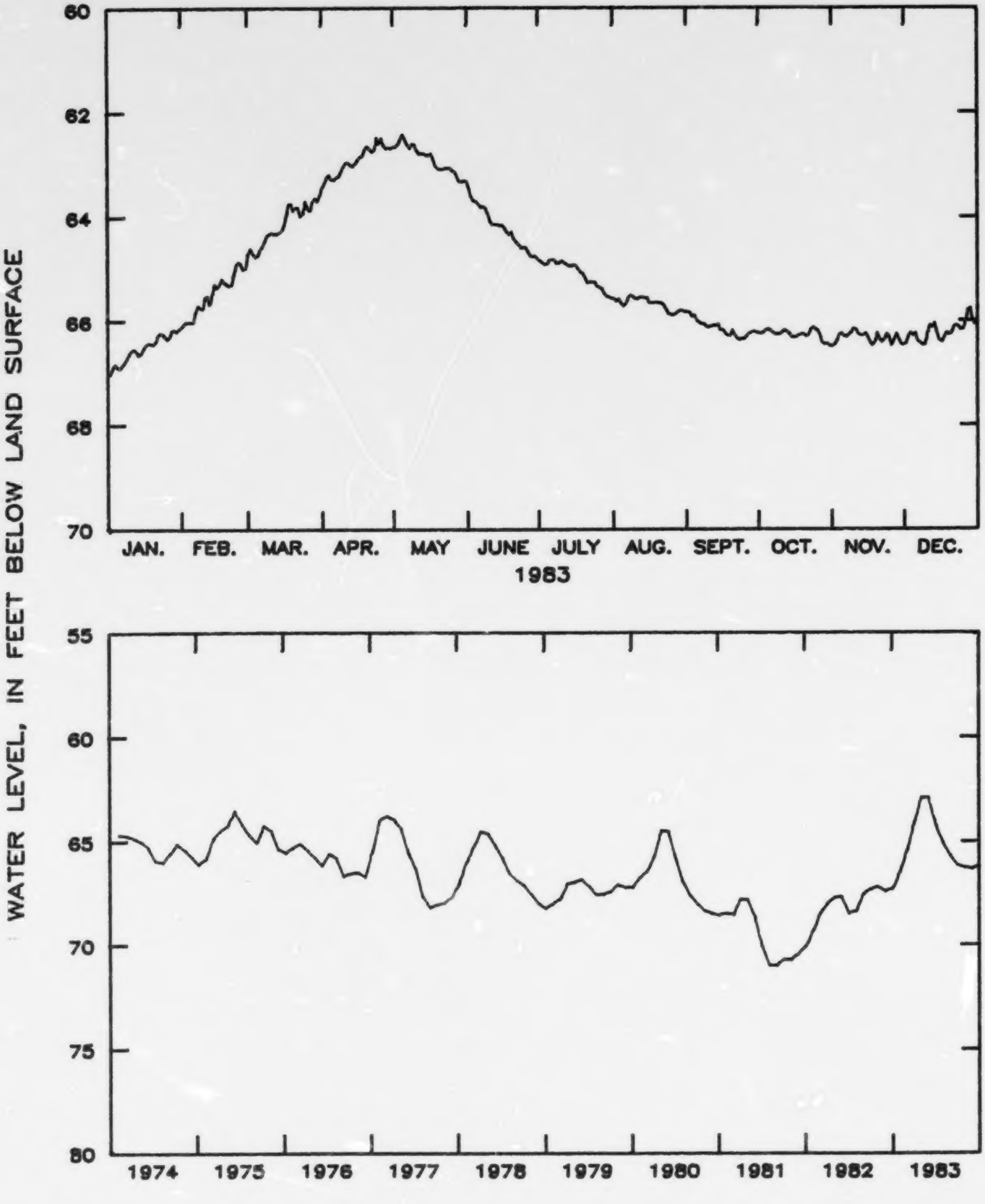


Figure 2.7.4.4—3.——Water level in observation well 27E002, Charlton County.

3.0 GROUND-WATER QUALITY

Water-quality samples are collected periodically throughout Georgia and analyzed as part of areal and regional ground-water studies. Wells along the coast have been monitored for chloride concentration since the late fifties. Chloride is indicative of brackish-water contamination and is readily analyzed in the field. Wells in the water-level monitoring networks also are pumped and sampled periodically to note any changes in water quality that may occur in the various aquifers of the State.

Where water-quality problems are noted, or are considered likely to occur, samples are collected more frequently and analyzed for water-quality constituents indicative of the problem. Streams also are sampled for water quality in those areas where the stream water recharges an aquifer. Withdrawals of ground water can induce water-quality problems that might not have otherwise occurred.

3.1 Savannah area

Ground-water pumpage, totaling about 75 Mgal/d in the Savannah area, has lowered the artesian water level in the Floridan aquifer system to about 120 feet below sea level in the cone of depression. This water-level decline has caused no significant increase in chloride concentration in the freshwater zones of the Floridan aquifer system during the past 20 years. Fourteen wells in the Savannah area are pumped and sampled periodically for chloride analysis.

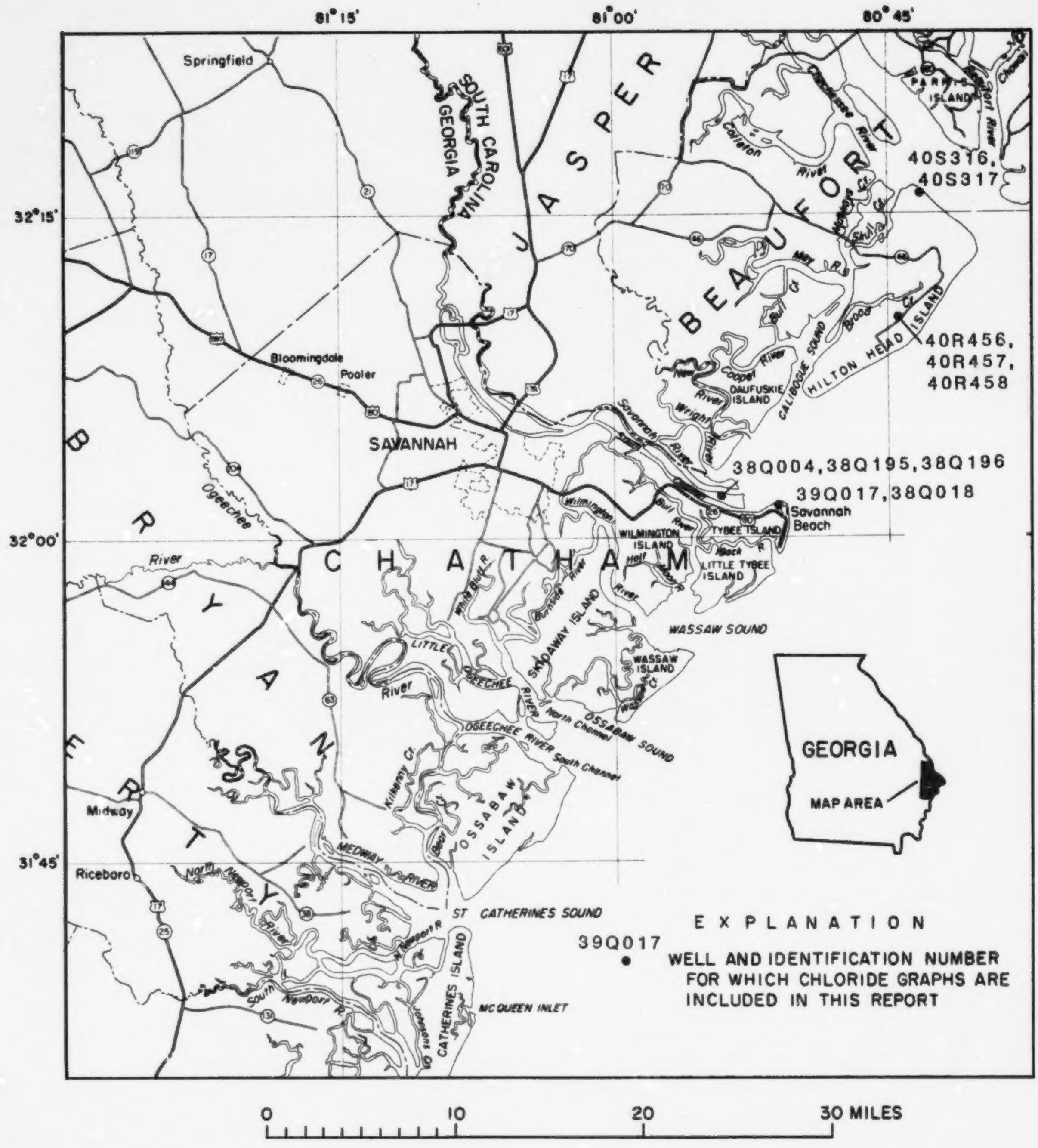

81° 15'
81° 00'
80° 45'
32° 15'
32° 00'
31° 45'
Springfield
SOUTH CAROLINA
GEORGIA
JASPER
BEAUFORT
PARRIS ISLAND
Broad River
Chechessee River
Colleton River
40S316, 40S317
May R.
Calibogue Sound
HILTON HEAD ISLAND
40R456, 40R457, 40R458
Bloomingdale
Pooler
SAVANNAH
New River
Cooper River
DAUFUSKIE ISLAND
Wright River
Savannah River
38Q004, 38Q195, 38Q196
39Q017, 38Q018
Savannah Beach
TYBEE ISLAND
WILMINGTON ISLAND
LITTLE TYBEE ISLAND
Wilmington River
Bull River
BRYAN
Ogeechee River
CHATHAM
SKIDAWAY ISLAND
Burnside River
Herb River
WASSAW SOUND
WASSAW ISLAND
LITTLE OGEECHEE River
OGEECHEE RIVER North Channel
OGEECHEE RIVER South Channel
OSSABAW SOUND
OSSABAW ISLAND
Kilkenny Cr.
Bear R.
LIBERTY
Midway
Riceboro
MEDWAY RIVER
North Newport River
South Newport R.
ST CATHERINES SOUND
CATHERINES ISLAND
Johnson Cr.
MCQUEEN INLET
GEORGIA
MAP AREA
EXPLANATION
39Q017 ●
WELL AND IDENTIFICATION NUMBER FOR WHICH CHLORIDE GRAPHS ARE INCLUDED IN THIS REPORT
0
10
20
30 MILES

Figure 3.1-1.—Location of chloride-monitoring wells in the Savannah area.

Chloride concentrations in Chatham County generally remained stable during 1974-82. At the end of 1983, the chloride concentration in one well rose. Well 38Q195 (depth, 1,230-1,363 ft) taps one of the deepest brackish-water zones of the Floridan aquifer system and has a chloride concentration of about 13,000 mg/L. Well 38Q196 (depth, 870-925 ft) also taps a brackish-water zone and has a chloride concentration of about 5,300 mg/L. Well 39Q017 (depth, 710-745 ft), well 39Q018 (depth, 630-670 ft), and well 38Q004 (depth, 606-657 ft) all have chloride concentrations of less than 900 mg/L. At the end of 1983, the chloride concentration at well 39Q018 increased, whereas the concentration at well 39Q017 decreased. More data are needed to assess whether these changes were due to well failure or to changes in nearby pumping.

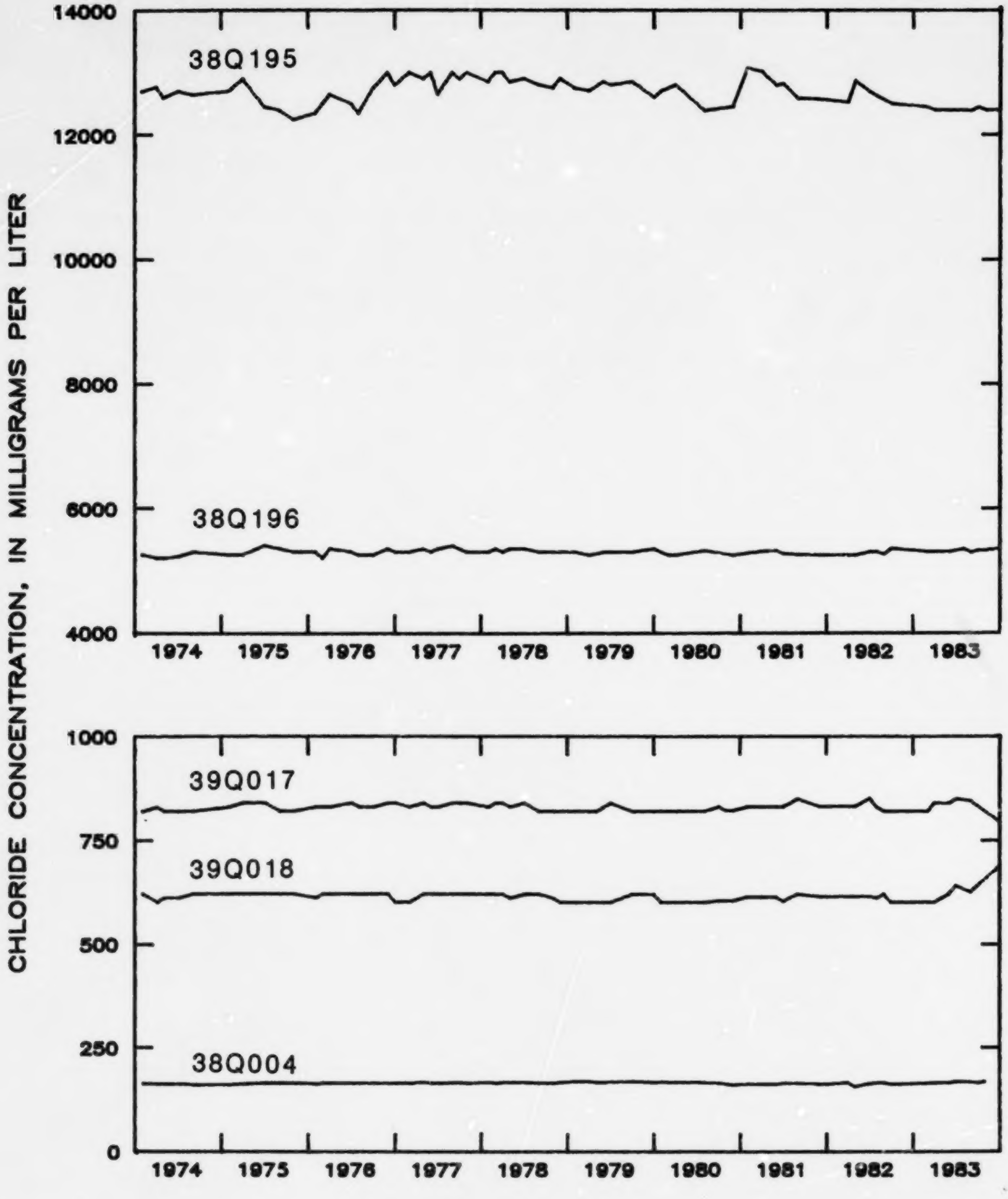


Figure 3.1—2.——Chloride concentrations in Chatham County.

U.S. Geological Survey wells 40R456, 40R457, 40R458, 40S316, and 40S317 are on Hilton Head Island, S.C. Well 40R458 (depth, 665-745 ft) had a chloride concentration ranging from 1,900 to 2,000 mg/L until 1981. At that time, the chloride concentration began to fluctuate, possibly in response to nearby pumping or due to well failure. Wells 40R456 (depth, 580-635 ft) and 40R457 (depth, 500-559 ft) showed little change in chloride concentrations for the period 1974-83.

The chloride concentration in well 40S316 (depth, 450-510 ft) in the lower part of the Floridan aquifer system has increased only slightly for the period 1974-83. The chloride concentration in well 40S317 (depth, 150-410 ft) has risen significantly since 1978. This increase may indicate that brackish water in the Floridan aquifer system is moving in response to pumping. There are, however, no data to indicate that any increase in chloride concentration has occurred in the upper part of the aquifer system that is utilized by most supply wells in the area.

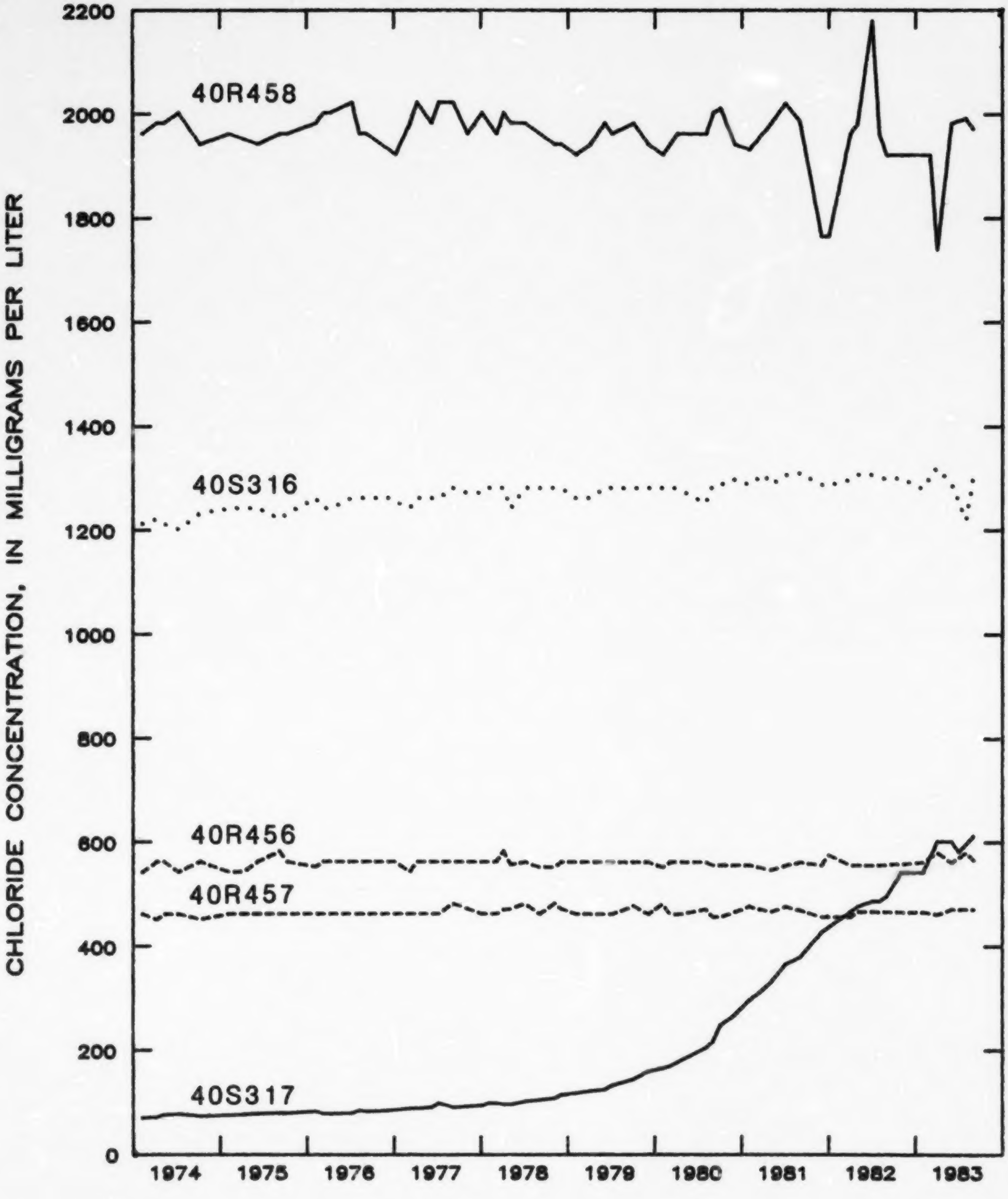


Figure 3.1–3.––Chloride concentrations on Hilton Head Island, South Carolina.

3.2 Brunswick Area

Since pumping began in the late 1800's, ground-water withdrawal in the Brunswick area has lowered the artesian water level in the Floridan aquifer system by as much as 25 to 65 feet. This water-level decline has allowed brackish water from underlying formations to migrate into the aquifer system at three known locations and move downgradient toward the centers of pumping. The brackish water has a chloride concentration of more than 6,000 mg/L. At two locations in Brunswick, the chloride concentration in the upper water-bearing zone of the Floridan aquifer system has risen to more than 2,000 mg/L.

About 100 wells in Glynn County, mostly in the Brunswick area, are pumped and sampled periodically for chloride analysis.

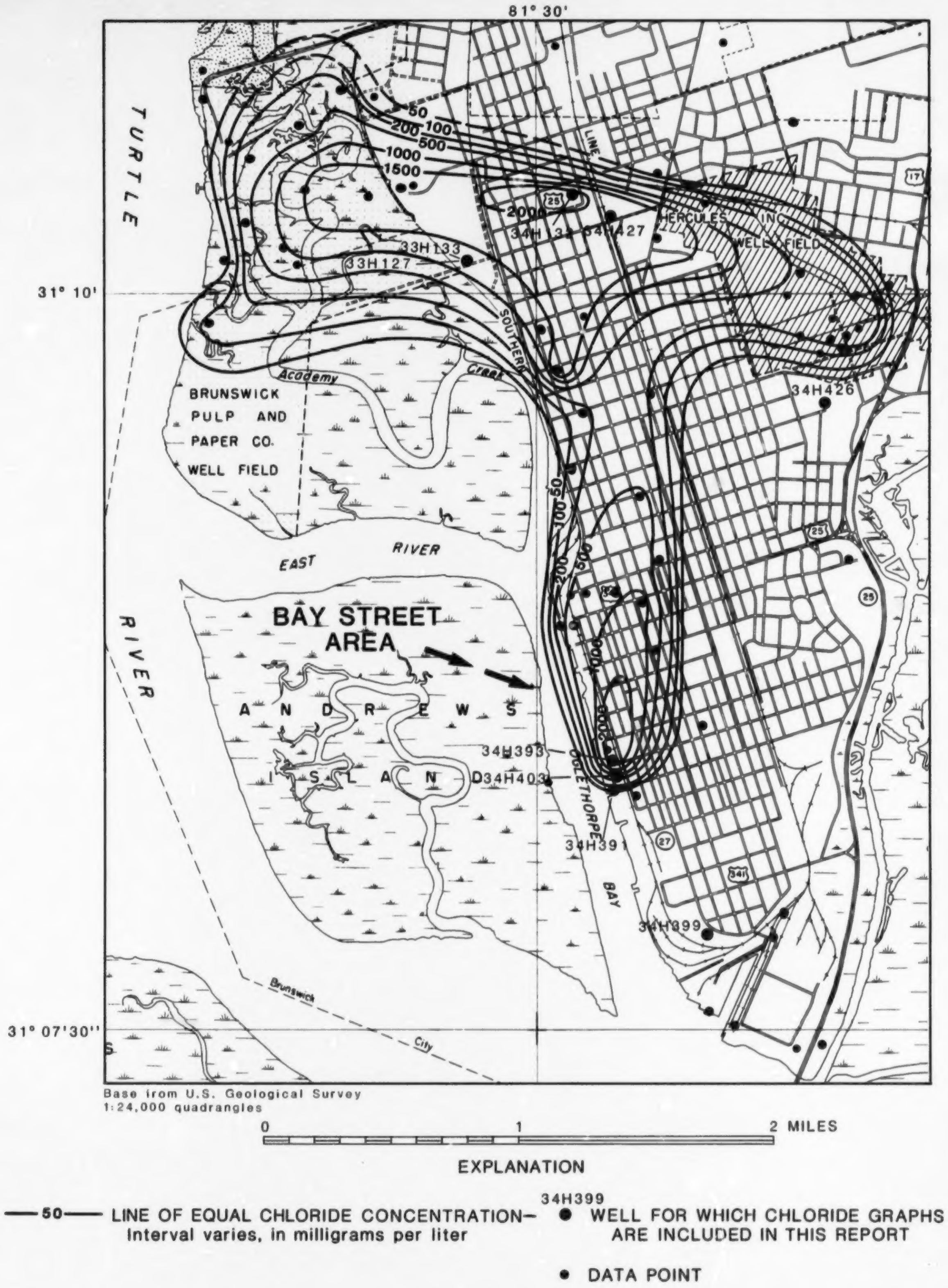

81° 30'
31° 10'
31° 07'30''
TURTLE
RIVER
EAST RIVER
Academy Creek
BRUNSWICK PULP AND PAPER CO. WELL FIELD
BAY STREET AREA
ANDREWS ISLAND
HERCULES INC. WELL FIELD
SOUTHERN
LINE
OGLETHORPE
BAY
Brunswick City
50
100
200
500
1000
1500
2000
33H133
33H127
34H13
34H427
34H426
34H393
34H403
34H391
34H399
17
25
27
341
Base from U.S. Geological Survey 1:24,000 quadrangles
0
1
2 MILES
EXPLANATION
50 LINE OF EQUAL CHLORIDE CONCENTRATION–Interval varies, in milligrams per liter
34H399 WELL FOR WHICH CHLORIDE GRAPHS ARE INCLUDED IN THIS REPORT
DATA POINT

Figure 3.2-1.—Locations of the chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October 1983.

Chloride concentrations in the Bay Street area respond to local pumping. Well 34H399 (depth, 1,075-1,218 ft) taps the brackish-water zone beneath the Floridan aquifer system and has shown a steady increase in chloride concentration from 1969 to 1982. This indicates that saltwater is invading the brackish-water zone from a deeper source in the cavernous limestone (Harold E. Gill, U.S. Geological Survey, oral commun., 1979; Gregg and Zimmerman, 1974). The chloride concentration at well 34H399 at the end of 1983 was 6,520 mg/L, a decrease of about 330 mg/L since 1982 in response to a reduction in pumpage. Well 34H391 (depth, 1,070-1,159 ft) also taps the brackish-water zone. For the first half of 1982, this well had a chloride concentration of about 2,700 mg/L. With the reduction in pumpage of about 20 Mgal/d in 1982, the chloride concentration decreased to about 2,350 mg/L. This decrease continued into 1983 and by the end of the year, the chloride concentration was 2,295 mg/L.

Well 34H393 (depth, 615-723 ft) taps the upper water-bearing zone of the Floridan aquifer system in the Bay Street area. The chloride concentration in this well has remained steady since 1975 and was about 2,400 mg/L in 1983. Well 34H403 (depth, 788-982 ft) is in the lower water-bearing zone of the aquifer system and yields water containing about 1,400 mg/L chloride. The chloride concentrations in both the upper and lower water-bearing zones of the Floridan aquifer system have remained fairly stable for the last few years.

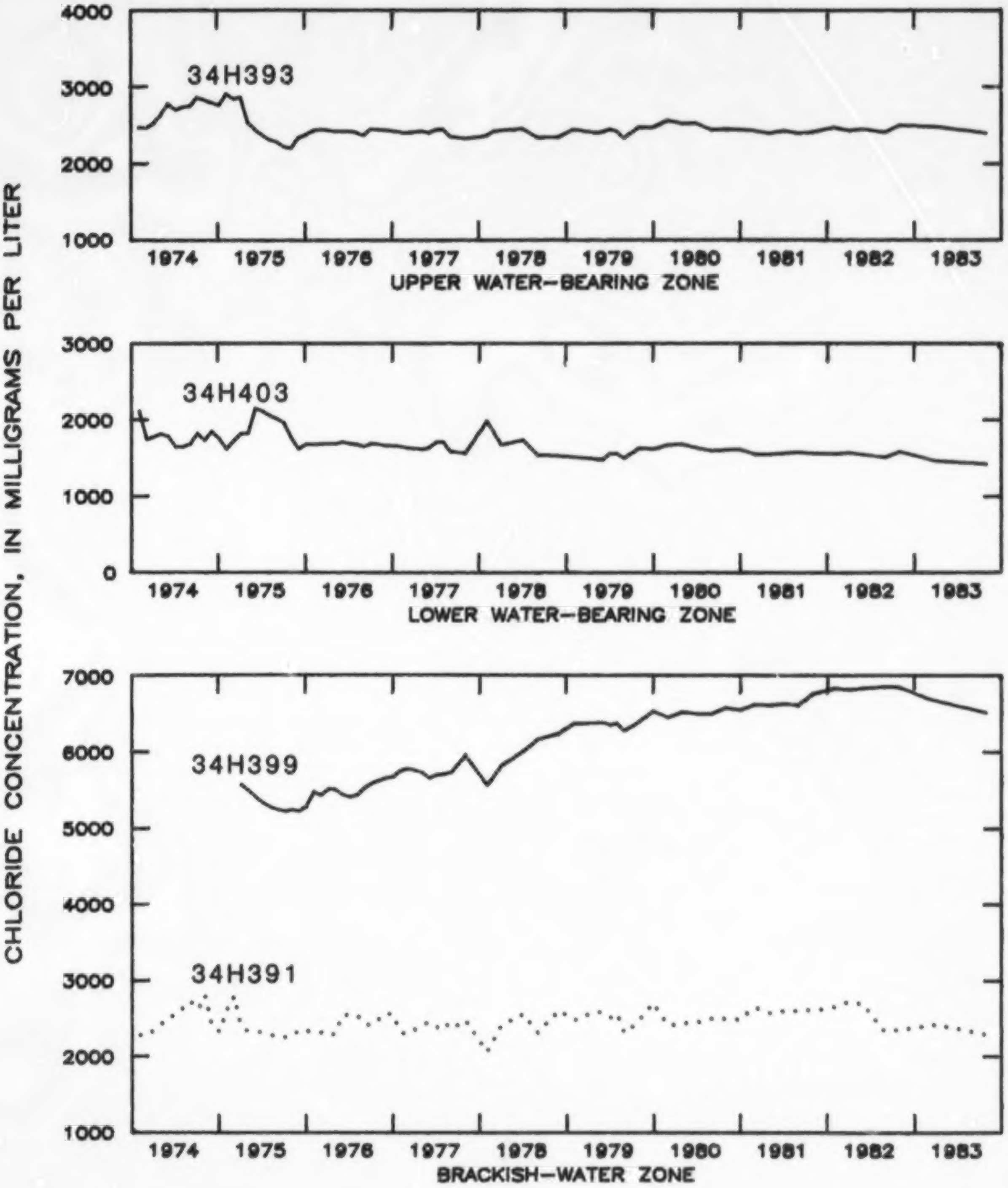


Figure 3.2-2.--Chloride concentrations in the Bay Street area of Brunswick.

Chloride concentrations remained steady in the North Brunswick area during 1983. Observation wells 34H427 (depth, 500-640 ft), 34H132 (depth, 540-566 ft), and 33H133 (depth, 520-790 ft) tap the upper water-bearing zone of the Floridan aquifer system. Observation well 34H427 showed a decrease in chloride concentration during 1982, and leveled off during 1983. The chloride concentration at the well was about 1,650 mg/L at the end of 1983. The chloride concentration in wells 34H132 and 33H133 continued to increase during 1982 but remained stable during 1983.

Well 33H127 (depth, 823-952 ft) taps the lower water-bearing zone. With the reduction in pumping in July 1982, the chloride concentration in this well began to fluctuate. During 1983, however, the chloride concentration remained steady. Well 34H426 (depth, 1,027-1,211 ft) taps the brackish-water zone beneath the Floridan aquifer system. The chloride concentration in this well had been fairly stable since 1978, but rose dramatically in late summer of 1982. During 1983, the chloride concentration remained stable. The decrease in pumping nearby during 1982 may have changed the principal direction of ground-water movement in the aquifer system and thus affected the chloride concentration. More data are needed to assess the implications of the 1982 rise in chloride concentration.

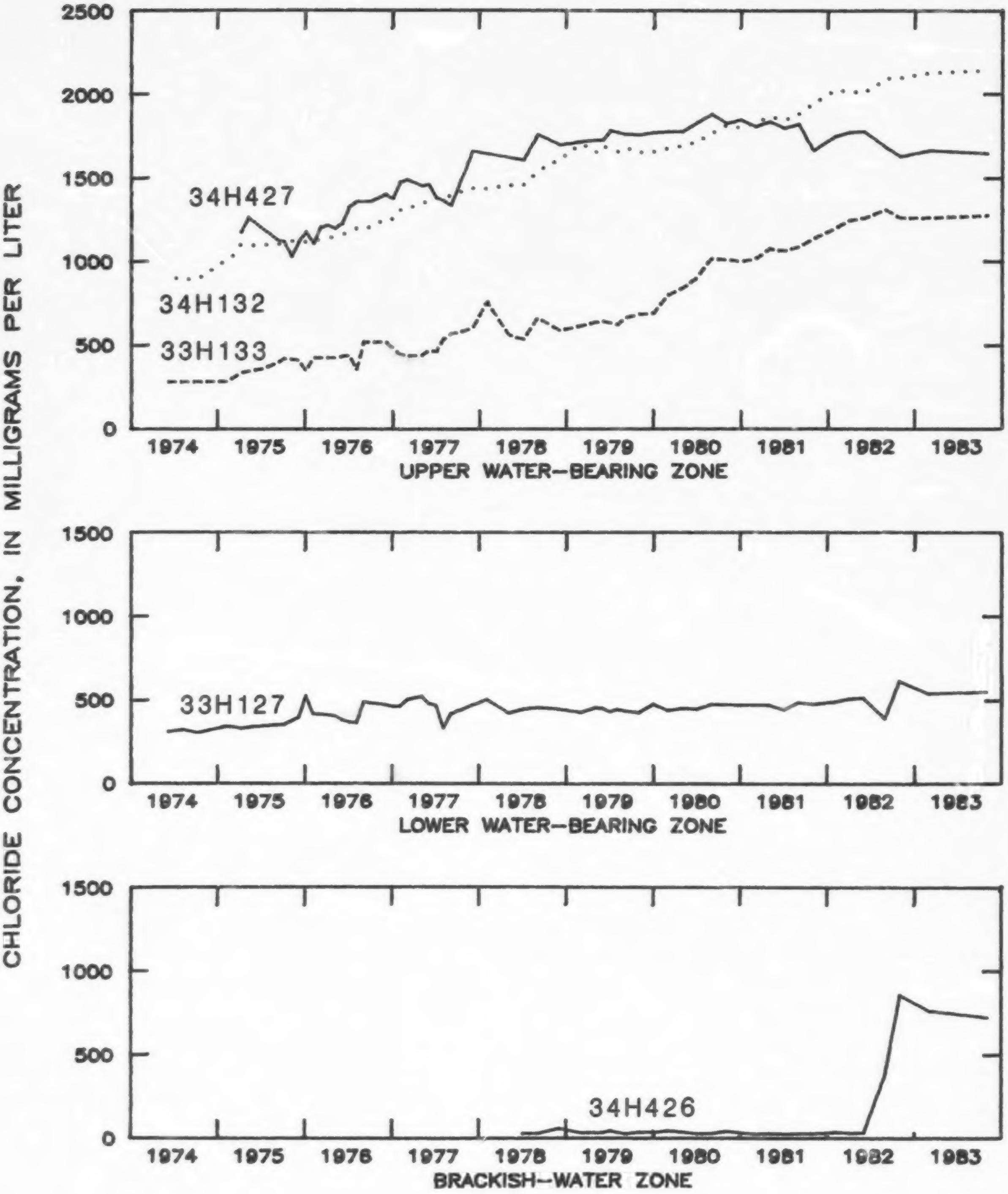


Figure 3.2-3.--Chloride concentrations in the North Brunswick area.

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